
UK Renal Registry 17th Annual Report: Chapter 2 UK Renal Replacement Therapy Prevalence in 2013: National and Centre-specific Analyses

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Key Words

Chronic kidney disease · Clinical Commissioning Group · Comorbidity · Diabetes · Dialysis · End stage renal disease · Established renal failure · Ethnicity · Haemodialysis · Peritoneal dialysis · Prevalence · Renal replacement therapy · Transplantation · Treatment modality

Summary

- There were 56,940 adult patients receiving renal replacement therapy (RRT) in the UK on 31st December 2013, an absolute increase of 4.0 % from 2012.
- The actual number of patients increased 1.2% for haemodialysis (HD), 7.1% for those with a functioning transplant but decreased 3.3% for peritoneal dialysis (PD).
- The UK adult prevalence of RRT was 888 per million population (pmp). The reported prevalence in 2000 was 523 pmp.
- The number of patients receiving home HD increased by 3% from 1,080 patients in 2012 to 1,113 patients in 2013.
- The median age of prevalent patients was 58.4 years (HD 66.9 years, PD 63.7 years, transplant 52.8 years). In 2000 the median age was 55 years (HD 63 years, PD 58 years, transplant 48 years). The percentage of RRT patients aged greater than 70 years increased from 19.2% in 2000 to 25% in 2013.
- For all ages, the prevalence rate in men exceeded that in women, peaking in age group 75–79 years at 3,010 pmp in men and for women at 1,560 pmp.
- The most common identifiable renal diagnosis was glomerulonephritis (19.0%), followed by aetiology uncertain (16.0 %) and diabetes (15.9%).
- Transplantation continued as the most common treatment modality (52%), HD was used in 41.6% and PD in 6.4% of RRT patients.
- Prevalence rates in patients aged >85 years continued to increase between 2012 and 2013 (983 pmp to 1,020 pmp).
- In 2013, 21.1% of the prevalent UK RRT population (with ethnicity assigned) were from ethnic minorities compared to 14.9% in 2007.

Introduction

This chapter presents data on all adult patients on RRT in the UK at the end of 2013. The UK Renal Registry (UKRR) received data returns for 2013 from all five renal centres in Wales, all five in Northern Ireland and all 52 in England. Data from all nine centres in Scotland were obtained from the Scottish Renal Registry. Demographic data on children and young adults can be found in chapter 4.

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 the planning process. In addition, knowledge about 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 and end stage renal disease, which are in more widespread international usage. Patients have disliked the term 'end stage' which reflects the inevitable outcome of this disease.

Methods

Crude prevalence rates were calculated per million population (pmp) and age/gender standardised prevalence ratios were calculated as detailed in appendix D: Methodology used for Analyses of Clinical Commissioning Group (CCG)/Health Board (HB) Incidence and Prevalence Rates and of Standardised Ratios. (www.renalreg.org).

Throughout this chapter, haemodialysis refers to all modes of HD treatment, including haemodiafiltration (HDF). Several centres reported significant numbers of patients on HDF, but other centres did not differentiate this treatment type in their UKRR returns. Where joint care of renal transplant recipients between the referring centre and the transplant centre occurred, the patient was usually allocated to the referring centre (refer to appendix B2 for allocation procedure). Thus the number of patients allocated to a transplant centre is often lower than that recorded by the centre itself and as a converse pre-emptively transplanted patients are sometimes allocated to the transplanting centre rather than the referring centre if no transfer out code had been sent through. Queries and updated information are welcomed by the UKRR at any point during the year if this has occurred.

Prevalent patients on RRT in 2013 were examined by time on RRT, age group, gender, ethnic origin, primary renal disease, presence of diabetes and treatment modality (see appendix H:

Coding) (www.renalreg.org). In the analysis of prevalence, only adult patients on RRT contributed to the numerator.

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, linear regression and Kruskal Wallis tests were used as appropriate to test for significant differences between groups. The data were analysed using SAS 9.3.

Results

Prevalent patient numbers and changes in prevalence

The number of patients for each country (table 2.1) was calculated by adding the patient numbers in each renal centre and these differ marginally from those quoted elsewhere in this report when patients are allocated to geographical areas by their individual postcodes, as some centres treat patients across national boundaries.

There were 56,940 adult patients receiving RRT in the UK at the end of 2013, giving an adult UK population prevalence of 888 pmp (table 2.1) compared with 861 pmp in 2012. Prevalence rates increased in all of the UK countries in 2013. PD prevalence decreased in the four countries compared with 2012. The decline in PD prevalence in the UK overall noted since 1997 was thought to have plateaued in 2011 and 2012 but has shown a further decline in 2013 with a prevalence rate of 57 pmp. Once more, the prevalence of transplanted patients increased in the UK. Northern Ireland had a higher RRT prevalence rate for patients aged 75 and older compared with the other UK countries (figure 2.1). In the UK, the RRT prevalence rate in patients aged 80–84 continued to rise over time from 1,896 per million age related population (pmarp) in 2012 to 1,922 pmarp in 2013 and in patients aged >85 years from 983 pmarp in 2012 to 1,021 pmarp in 2013. It is likely that this ageing of the prevalent population was due to an increasing number of older patients starting RRT, although improving patient survival will also contribute.

Prevalent patients by RRT modality and centre

The number of prevalent patients in each renal centre and the distribution of their treatment modalities varied widely (table 2.2). Many factors including geography, local population density, age distribution, ethnic

Table 2.1. Prevalence of adult RRT in the UK on 31/12/2013

	England	N Ireland	Scotland	Wales	UK
Number of prevalent patients	48,053	1,546	4,564	2,777	56,940
Total estimated population, mid-2013 (millions)*	53.9	1.8	5.3	3.1	64.1
Prevalence rate HD (pmp)	373	355	349	350	369
Prevalence rate PD (pmp)	59	44	42	59	57
Prevalence rate dialysis (pmp)	432	400	392	409	427
Prevalence rate transplant (pmp)	460	445	465	492	462
Prevalence rate total (pmp)	892	845	857	901	888
95% confidence intervals total (pmp)	884–900	803–887	832–882	867–934	881–896

*Data from the Office for National Statistics, National Records of Scotland and the Northern Ireland Statistics and Research Agency – based on the 2011 census

composition, prevalence of diseases predisposing to kidney disease and the social deprivation index of that population may contribute to this. Patient survival on RRT would also contribute and may be influenced by access to high quality health care for the comorbid conditions seen in these patients.

Changes in prevalence

Overall growth in the prevalent UK RRT population from 2012 to 2013 was 4.0% (table 2.3), an annual growth rate which has been fairly consistent over the last 10–15 years (figure 2.2). The increases in prevalence across Scotland and Wales were similar at 1.4% and 1.6% respectively. The increase in prevalence in England was highest in magnitude at 4.5%. In Northern Ireland the increase in the prevalent RRT population was 2.2% between 2012 and 2013.

From 2012 to 2013, for the first time there was a fall in prevalent HD patients with a 0.1% pmp decrease, a 5.8% pmp increase in those with a functioning transplant and a 4.6% pmp decline in patients on PD.

Between 2008 and 2013 there was an average annual 1.6% pmp growth in HD, 3.7% pmp fall in PD, and 4.9% pmp growth in prevalent transplant patients in the UK (table 2.4). In the same period there was an average annual 13.3% pmp growth in the use of home haemodialysis (data not shown).

Prevalence rates between centres showed marked variation (table 2.2); the long-term (1997–2013) UK prevalence pattern by treatment modality is shown in figure 2.2. The steady growth in transplant numbers was maintained in 2013. The increase in haemodialysis patient numbers has been associated with an increase in home haemodialysis, from 2.1% of the dialysis population in 2004 ($n = 449$) to 4.1% in 2013 ($n = 1,113$) with the number of patients doubling over the 10 year period. In contrast PD has fallen by 6.5% between 2004 and 2013.

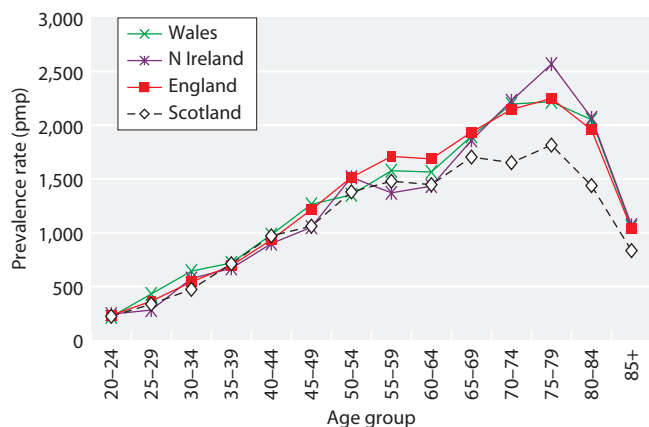


Fig. 2.1. Prevalence rates per million population by age group and UK country on 31/12/2013

Prevalence of RRT in Clinical Commissioning Groups in England (CCGs), Health and Social Care Areas in Northern Ireland (HBs), Local Health Boards in Wales (HBs) and Health Boards in Scotland (HBs)

The need for RRT depends on many factors such as predisposing conditions but also on social and demographic factors such as age, gender, social deprivation and ethnicity. Hence, comparison of crude prevalence rates by geographical area can be misleading. This section, as in previous reports, uses age and gender standardisation to compare RRT prevalence rates. The ethnic minority profile is also provided to help understand the differences in standardised prevalence ratios (SPRs).

Table 2.2. Number of prevalent RRT patients by treatment modality and centre on 31/12/2013

Centre	N					Catchment population (millions)	2013 crude rate pmp	(95% CI)
	HD	PD	Dialysis	Transplant	RRT			
England								
B Heart	435	41	476	182	658	0.74	892	(823–960)
B QEH ^a	933	137	1,070	981	2,051	1.70	1,207	(1,155–1,259)
Basldn	160	30	190	80	270	0.42	651	(573–728)
Bradfd	202	30	232	288	520	0.65	798	(729–866)
Brightn	398	79	477	398	875	1.30	675	(630–719)
Bristol ^a	514	67	581	846	1,427	1.44	991	(940–1,043)
Camb ^a	380	25	405	793	1,198	1.16	1,035	(976–1,093)
Carlis	68	28	96	131	227	0.32	708	(616–800)
Carsh	762	122	884	604	1,488	1.91	778	(738–818)
Chelms	123	21	144	95	239	0.51	468	(409–528)
Colchr	115		115		115	0.30	384	(314–454)
Covnt ^{a,b}	383	86	469	471	940	0.89	1,054	(986–1,121)
Derby	217	85	302	170	472	0.70	672	(611–732)
Donc	163	35	198	61	259	0.41	632	(555–708)
Dorset	267	48	315	313	628	0.86	729	(672–786)
Dudley	175	56	231	81	312	0.44	706	(628–785)
Exeter ^b	410	73	483	413	896	1.09	823	(769–876)
Glouc	211	33	244	168	412	0.59	702	(634–769)
Hull	327	80	407	408	815	1.02	799	(744–854)
Ipswi	122	30	152	202	354	0.40	887	(795–980)
Kent	395	64	459	506	965	1.22	788	(738–838)
L Barts ^a	954	197	1,151	952	2,103	1.83	1,149	(1,100–1,198)
L Guys ^a	630	29	659	1,182	1,841	1.08	1,701	(1,623–1,779)
L Kings	498	105	603	362	965	1.17	824	(772–876)
L Rfree ^a	731	131	862	1,093	1,955	1.52	1,288	(1,231–1,345)
L St.G ^{a,b}	280	48	328	431	759	0.80	951	(884–1,019)
L West ^a	1,398	61	1,459	1,683	3,142	2.40	1,310	(1,264–1,356)
Leeds ^a	507	69	576	890	1,466	1.67	878	(833–923)
Leic ^a	905	152	1,057	1,015	2,072	2.44	851	(814–887)
Liv Ain	155	30	185	5	190	0.48	393	(337–448)
Liv Roy ^a	359	58	417	852	1,269	1.00	1,269	(1,199–1,339)
M RI ^a	522	83	605	1,259	1,864	1.53	1,217	(1,162–1,272)
Middlbr	351	14	365	471	836	1.00	833	(776–889)
Newc ^a	274	42	316	648	964	1.12	860	(806–914)
Norwch	330	40	370	322	692	0.79	880	(814–945)
Nottm ^a	371	83	454	621	1,075	1.09	988	(929–1,047)
Oxford ^a	435	99	534	1,031	1,565	1.69	926	(880–972)
Plymth ^a	134	37	171	332	503	0.47	1,071	(977–1,164)
Ports ^a	600	85	685	870	1,555	2.02	768	(730–807)
Prestn	547	56	603	487	1,090	1.49	730	(687–773)
Redng	282	76	358	373	731	0.91	803	(745–861)
Salford ^b	399	85	484	411	895	1.49	601	(561–640)
Sheff ^a	589	70	659	670	1,329	1.37	969	(917–1,021)
Shrew	187	32	219	123	342	0.50	683	(611–755)
Stevng ^b	464	40	504	254	758	1.20	630	(585–674)
Sthend	120	18	138	83	221	0.32	698	(606–790)
Stoke	311	87	398	328	726	0.89	816	(757–875)
Sund	197	11	208	215	423	0.62	684	(619–749)
Truro	151	24	175	202	377	0.41	913	(820–1,005)
Wirral	213	35	248	4	252	0.57	441	(386–495)
Wolve	301	82	383	180	563	0.67	842	(772–911)
York	140	27	167	242	409	0.49	831	(750–911)

Table 2.2. Continued

Centre	N					Catchment population (millions)	2013 crude rate pmp	(95% CI)
	HD	PD	Dialysis	Transplant	RRT			
Northern Ireland								
Antrim	127	15	142	82	224	0.29	760	(660–860)
Belfast ^a	212	27	239	490	729	0.64	1,145	(1,061–1,228)
Newry	92	18	110	89	199	0.26	762	(656–868)
Ulster	106	6	112	44	156	0.27	586	(494–678)
West NI	113	15	128	110	238	0.35	676	(590–762)
Scotland								
Abrdn	223	25	248	271	519	0.60	865	(791–940)
Airdrie	192	14	206	187	393	0.55	712	(642–782)
D & Gall	45	15	60	57	117	0.15	788	(645–931)
Dundee	172	21	193	210	403	0.46	870	(785–955)
Edinb ^a	276	30	306	433	739	0.96	766	(711–822)
Glasgw ^a	599	44	643	955	1,598	1.62	984	(936–1,032)
Inverns	69	15	84	132	216	0.27	800	(693–907)
Klmarnk	137	43	180	116	296	0.36	819	(726–912)
Krkldy	147	19	166	117	283	0.32	894	(789–998)
Wales								
Bangor	86	13	99		99	0.22	454	(364–543)
Cardff ^a	486	75	561	1,023	1,584	1.42	1,115	(1,061–1,170)
Clwyd	76	14	90	63	153	0.19	807	(679–935)
Swanse	329	58	387	304	691	0.89	780	(722–839)
Wrexm	101	22	123	127	250	0.24	1,041	(912–1,170)
England	20,095	3,176	23,271	24,782	48,053			
N Ireland	650	81	731	815	1,546			
Scotland	1,860	226	2,086	2,478	4,564			
Wales	1,078	182	1,260	1,517	2,777			
UK	23,683	3,665	27,348	29,592	56,940			

Blank cells indicate no patients on that treatment type attending that centre when data were collected

Centres prefixed 'L' are London centres

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

^aTransplant centres

^bSubsequent to closing the 2013 database several centres reporting a variation to the numbers returned. Tables 2.1, 2.3 and 2.4 (but not the remainder of this chapter) reflect these revisions (Covnt (+8), Exeter (+6), L St.G (+5), Salford (+9), Stevng (–7))

The impact of social deprivation was reported in the 2003 UKRR Report [1].

There were substantial variations in the crude CCG/HB prevalence rates pmp, from 474 pmp (Shetland, population 23,200) to 1,656 pmp (NHS Brent, population 314,700). There were similar variations in the standardised prevalence ratios (ratio of observed: expected prevalence rate given the age/gender breakdown of the CCG/HB) from 0.50 (Shetland) to 2.19 (Brent) (table 2.5). Confidence intervals are not presented for the crude rates per million population for 2013 but figures D3 and D4 in appendix D (www.renalreg.org) can be used to determine if a CCG/HB falls within the range representing the 95% confidence limit of the national average prevalence rate.

Factors associated with variation in standardised prevalence ratios in Clinical Commissioning Groups in England, Health and Social Care Trust Areas in Northern Ireland, Local Health Boards in Wales and Health Boards in Scotland

In 2013, there were 78 CCGs/HBs with a significantly low SPR, 112 with a 'normal' SPR and 47 with a significantly high SPR (table 2.5). The areas with high and low SPRs have been fairly consistent over the last few years. They tend to reflect the demographics of the regions in question such that urban, ethnically diverse populations in areas of high social deprivation have the highest prevalence rates of renal replacement therapy. Mean SPRs were significantly higher in the 88 CCGs/HBs with an ethnic minority population greater than

Table 2.3. Number of prevalent patients on RRT by centre at year end 2009–2013

Centre	Date					% change 2012–2013	% annual change 2009–2013
	31/12/2009	31/12/2010	31/12/2011	31/12/2012	31/12/2013		
England							
B Heart	626	635	666	671	658	–1.9	1.3
B QEH	1,821	1,844	1,912	1,971	2,051	4.1	3.0
Basldn	214	214	233	258	270	4.7	6.0
Bradfd	426	455	467	504	520	3.2	5.1
Brightn	737	770	777	831	875	5.3	4.4
Bristol	1,236	1,264	1,317	1,337	1,427	6.7	3.7
Camb	942	1,004	1,076	1,111	1,198	7.8	6.2
Carlis	205	206	215	216	227	5.1	2.6
Carsh	1,302	1,377	1,380	1,460	1,488	1.9	3.4
Chelms	228	238	216	224	239	6.7	1.2
Colchr	116	120	119	117	115	–1.7	–0.2
Covnt	794	844	874	897	940	4.8	4.3
Derby	419	459	467	476	472	–0.8	3.0
Donc	196	222	248	261	259	–0.8	7.2
Dorset	553	585	587	609	628	3.1	3.2
Dudley	292	303	286	314	312	–0.6	1.7
Exeter	731	785	809	842	896	6.4	5.2
Glouc	366	377	381	416	412	–1.0	3.0
Hull	725	725	757	782	815	4.2	3.0
Ipswi	312	316	340	339	354	4.4	3.2
Kent	744	797	864	919	965	5.0	6.7
L Barts	1,638	1,778	1,874	1,956	2,103	7.5	6.4
L Guys	1,616	1,627	1,684	1,741	1,841	5.7	3.3
L Kings	786	837	872	918	965	5.1	5.3
L Rfree	1,546	1,639	1,727	1,854	1,955	5.4	6.0
L St.G	663	684	716	710	759	6.9	3.4
L West	2,736	2,879	3,020	3,100	3,142	1.4	3.5
Leeds	1,348	1,383	1,425	1,413	1,466	3.8	2.1
Leic	1,737	1,809	1,927	1,975	2,072	4.9	4.5
Liv Ain	148	161	190	194	190	–2.1	6.4
Liv Roy	1,223	1,238	1,250	1,237	1,269	2.6	0.9
M RI	1,453	1,557	1,650	1,711	1,864	8.9	6.4
Middlbr	707	711	754	790	836	5.8	4.3
Newc	899	903	919	946	964	1.9	1.8
Norwch	594	617	611	623	692	11.1	3.9
Nottm	981	1,012	1,022	1,012	1,075	6.2	2.3
Oxford	1,343	1,423	1,451	1,533	1,565	2.1	3.9
Plymth	457	462	465	458	503	9.8	2.4
Ports	1,301	1,333	1,394	1,445	1,555	7.6	4.6
Prestn	941	970	1,018	1,078	1,090	1.1	3.7
Redng	618	636	688	672	731	8.8	4.3
Salford	785	837	832	880	895	1.7	3.3
Sheff	1,216	1,254	1,260	1,299	1,329	2.3	2.2
Shrew	337	345	345	357	342	–4.2	0.4
Stevng	584	608	641	668	758	13.5	6.7
Sthend	207	212	208	213	221	3.8	1.6
Stoke	643	659	696	699	726	3.9	3.1
Sund	368	369	388	422	423	0.2	3.5
Truro	320	336	356	377	377	0.0	4.2
Wirral	224	224	234	225	252	12.0	3.0
Wolve	490	532	513	524	563	7.4	3.5
York	321	340	340	396	409	3.3	6.2

Table 2.3. Continued

Centre	Date					% change 2012–2013	% annual change 2009–2013
	31/12/2009	31/12/2010	31/12/2011	31/12/2012	31/12/2013		
N Ireland							
Antrim	217	218	225	223	224	0.4	0.8
Belfast	680	682	685	703	729	3.7	1.8
Newry	172	179	190	188	199	5.9	3.7
Ulster	114	115	137	145	156	7.6	8.2
West NI	258	258	270	253	238	−5.9	−2.0
Scotland							
Abrdn	452	462	478	505	519	2.8	3.5
Airdrie	310	326	344	388	393	1.3	6.1
D & Gall	118	118	122	127	117	−7.9	−0.2
Dundee	395	385	400	401	403	0.5	0.5
Edinb	721	731	700	723	739	2.2	0.6
Glasgw	1,469	1,505	1,477	1,555	1,598	2.8	2.1
Inverns	229	232	225	221	216	−2.3	−1.5
Klmarnk	273	284	299	302	296	−2.0	2.0
Krkldy	241	263	278	278	283	1.8	4.1
Wales							
Bangor	110	113	109	105	99	−5.7	−2.6
Cardff	1,426	1,517	1,534	1,544	1,584	2.6	2.7
Clwyd	147	142	137	173	153	−11.6	1.0
Swanse	618	635	657	662	691	4.4	2.8
Wrexm	219	223	237	248	250	0.8	3.4
England	41,215	42,915	44,461	45,981	48,053	4.5	3.9
N Ireland	1,441	1,452	1,507	1,512	1,546	2.2	1.8
Scotland	4,208	4,306	4,323	4,500	4,564	1.4	2.1
Wales	2,520	2,630	2,674	2,732	2,777	1.6	2.5
UK	49,384	51,303	52,965	54,725	56,940	4.0	3.6

10% than in those with lower ethnic minority populations ($p < 0.001$). The SPR was positively correlated with the percentage of the population that are non-White ($r = 0.9$ $p < 0.001$). In 2013 for each 10% increase in ethnic minority population, the standardised prevalence ratio increased by 0.17 (equates to $\sim 17\%$). In figure 2.3,

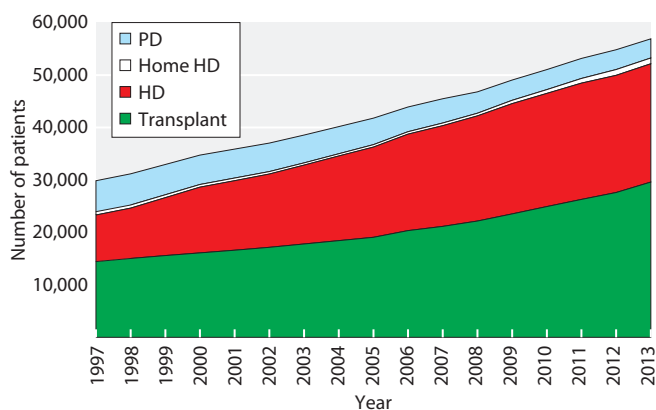


Fig. 2.2. Growth in prevalent patients by treatment modality at the end of each year 1997–2013

the relationship between the ethnic composition of a CCG/HB and its SPR is demonstrated.

Only two of the 149 CCGs/HBs with ethnic minority populations of less than 10% had high SPRs: Abertawe Bro Morgannwg University and Cwm Taf. Forty-five (51.1%) of the 88 CCGs/HBs with ethnic minority populations greater than 10% had high SPRs, whereas nine (10%) (NHS Airedale, Wharfedale and Craven; NHS Brighton & Hove, NHS Chiltern, NHS Havering, NHS East and North Hertfordshire, NHS Leeds North, NHS Leeds West, NHS Richmond, NHS Solihull) had low SPRs. Some of the CCGs/HBs with a high (>15%) ethnic minority population had a normal expected RRT prevalence rate (e.g. NHS Bolton, NHS Oldham, NHS North and South Manchester). The age and gender standardised prevalence ratios in each region of England and in Wales, Northern Ireland and Scotland are presented in table 2.6. These calculations have not taken into account variation in ethnicity between areas. Wales and Northern Ireland previously had higher than expected prevalence rates but in more recent years were

Table 2.4. Change in RRT prevalence rates pmp 2008–2013 by modality*

Year	Prevalence					% growth in prevalence pmp				
	HD pmp	PD pmp	Dialysis pmp	Transplant pmp	RRT pmp	HD	PD	Dialysis	Tx	RRT
2008	342	69	411	363	774					
2009	354	64	417	377	794	3.5	−7.8	1.6	3.7	2.6
2010	359	62	421	397	818	1.5	−3.2	0.8	5.4	3.0
2011	365	60	426	416	841	1.7	−2.2	1.1	4.7	2.9
2012	370	60	430	436	866	1.3	−0.9	1.0	5.0	3.0
2013	369	57	427	462	888	−0.1	−4.6	−0.8	5.8	2.5
Average annual growth 2008–2013						1.6	−3.7	0.8	4.9	2.8

*Differences in the figures for dialysis and RRT prevalence and the sum of the separate modalities are due to rounding

pmp – per million population

Tx = transplant

similar to their expected rates. Scotland had lower than expected prevalence rates of RRT.

Case mix in prevalent RRT patients

Time on RRT (vintage)

Table 2.7 shows the median time, in years, since starting RRT of prevalent RRT patients on 31st December 2013. Median time on RRT for all prevalent patients remained fairly static at 6.0 years. Patients with functioning transplants had survived a median of 10.1 years on RRT whilst the median time on RRT of HD and PD patients was significantly less (3.4 and 1.7 years respectively).

The increase in the time on HD compared to a lesser time spent on PD could reflect early transplantation in the PD group. Time on transplant has decreased since 2008 (median 10.4 years) which may reflect increased use of DCD donors and transplantation of more marginal candidates.

Age

The median age of prevalent UK patients on RRT at 31st December 2013 was static (58.4 years) compared with 2012 (58.3 years) (table 2.8) and significantly higher than in 2005 when it was 55 years. There were marked differences between modalities; the median age of HD patients (66.9 years) was greater than that of those on PD (63.7 years) and substantially higher than that of transplanted patients (52.8 years). Nearly half (49.9%) of the UK prevalent RRT population was in the 40–64 years age group (table 2.9). The proportion of patients aged 75 years and older was 17.4% in Wales, 16.4% in Northern Ireland, 15.8% in England and 13.7% in Scotland (table 2.9). Furthermore, there existed a wide range between centres in the proportion of patients aged over 75 (7.9% in Liverpool Royal Infirmary to

37.4% in Colchester). In most centres the prevalent PD population was younger than the HD population. This is different to the Australian data where PD patients were older on average than HD patients [2]. This highlights the lack of evidence concerning which patients are best treated with PD and a potential area for future research.

Colchester had the highest median age (69.9 years), whilst Manchester RI and Belfast the lowest (54.1 years) (table 2.8). This could reflect either variation in the demography of the catchment populations or follow-up of younger transplant patients (as above in the case of Belfast and Manchester RI). The median age of the non-White dialysis population was lower than the overall dialysis population (61.1 vs. 66.6 years, data not shown). The differing age distributions of the transplant and dialysis populations are illustrated in figure 2.4, demonstrating that the age peak for prevalent dialysis patients is 24 years later than for prevalent transplant patients.

In the UK on 31st December 2013, 65.1% of patients aged less than 65 years on RRT had a functioning transplant (table 2.15), compared with only 28.8% aged 65 years and over. There was a similar pattern in all four UK countries.

Gender

Age profile was very similar for both males and females (data not shown). Standardising the age of the UK RRT prevalent patients, by using the age and gender distribution of the UK population by CCG/HB (from mid-2012 population estimates), allowed estimation of crude prevalence rates by age and gender (figure 2.5). This shows a progressive increase in prevalence rate with age, peaking at 2,218 pmp (a slight increase from 2,138 pmp in 2012) in the age group 75–79 years before showing a reducing prevalence rate in age groups over

Table 2.5. Prevalence of RRT and standardised prevalence ratios in CCG/HB areas

CCG/HB – Clinical Commissioning Groups (England); Health and Social Care Trust Areas (Northern Ireland); Health Board (Scotland) and Local Health Board (Wales)

O/E – standardised prevalence ratio. Ratio of observed: expected rate of RRT given the age and gender breakdown of the area

LCL – lower 95% confidence limit

UCL – upper 95% confidence limit

pmp – per million population

Areas with significantly low prevalence ratios in 2013 are italicised in greyed areas, those with significantly high prevalence ratios in 2013 are bold in greyed areas

Population numbers are the 2012 mid-year estimates by age group and gender (data obtained from the Office of National Statistics, National Records of Scotland and the Northern Ireland Statistics and Research Agency – based on the 2011 Census)

% non-White – percentage of the CCG/HB population that is non-White, from 2011 Census

ONS specifies that the populations should be rounded to the nearest 100 when being presented

UK area	Name	Total population	2008 O/E	2009 O/E	2010 O/E	2011 O/E	2012 O/E	2013			% non-White	
								O/E	95% LCL	95% UCL		Crude rate pmp
Cheshire, Warrington and Wirral	<i>NHS Eastern Cheshire</i>	195,300	0.75	0.72	0.76	0.77	0.81	0.80	0.68	0.94	809	3.7
	NHS South Cheshire	176,800	0.95	0.95	0.93	0.90	0.89	0.90	0.77	1.05	854	2.9
	<i>NHS Vale Royal</i>	102,100	0.72	0.76	0.73	0.75	0.71	0.77	0.61	0.97	724	2.1
	<i>NHS Warrington</i>	203,700	0.88	0.94	0.86	0.83	0.82	0.85	0.73	0.99	771	4.1
	NHS West Cheshire	228,100	0.91	0.95	0.96	0.98	0.94	0.97	0.85	1.11	938	2.8
	<i>NHS Wirral</i>	320,200	0.85	0.82	0.80	0.79	0.78	0.79	0.70	0.90	753	3.0
Durham, Darlington and Tees	NHS Darlington	105,200	0.83	0.85	0.81	0.76	0.81	0.81	0.65	1.01	751	3.8
	NHS Durham Dales, Easington and Sedgfield	273,000	0.95	0.95	0.95	0.99	0.96	0.99	0.88	1.12	960	1.2
	NHS Hartlepool and Stockton-on-Tees	284,600	0.90	0.87	0.86	0.90	0.93	0.93	0.82	1.06	840	4.4
	<i>NHS North Durham</i>	241,300	0.79	0.75	0.75	0.74	0.82	0.78	0.67	0.90	725	2.5
	NHS South Tees	273,700	1.11	1.06	1.03	1.06	1.05	1.05	0.93	1.19	953	6.7
Greater Manchester	NHS Bolton	279,000	1.03	0.95	1.05	1.09	1.07	1.03	0.91	1.17	896	18.1
	NHS Bury	186,200	0.88	0.95	0.91	0.92	0.92	0.92	0.78	1.08	822	10.8
	NHS Central Manchester	182,400	1.46	1.45	1.53	1.47	1.51	1.62	1.40	1.87	987	48.0
	NHS Heywood, Middleton & Rochdale	212,000	0.98	1.01	0.95	0.99	1.00	1.04	0.90	1.20	887	18.3
	NHS North Manchester	167,100	0.97	1.12	1.09	1.10	1.14	1.14	0.96	1.35	796	30.8
	NHS Oldham	225,900	0.97	0.96	0.94	0.93	0.94	0.98	0.85	1.13	819	22.5
	NHS Salford	237,100	0.86	0.82	0.84	0.83	0.85	0.88	0.76	1.03	725	9.9
	NHS South Manchester	161,300	0.94	0.94	0.97	0.97	1.01	1.01	0.85	1.21	744	19.6
	<i>NHS Stockport</i>	283,900	0.87	0.83	0.86	0.88	0.88	0.81	0.71	0.93	761	7.9
	NHS Tameside and Glossop	253,400	0.96	0.95	0.96	0.95	0.95	0.94	0.83	1.08	848	8.2
	NHS Trafford	228,500	0.72	0.76	0.87	0.84	0.86	0.87	0.75	1.01	775	14.5
NHS Wigan Borough	318,700	0.83	0.82	0.83	0.90	0.93	0.95	0.85	1.07	876	2.7	
Lancashire	NHS Blackburn with Darwen	147,700	1.23	1.24	1.23	1.27	1.24	1.23	1.05	1.45	988	30.8
	NHS Blackpool	142,000	0.80	0.87	0.80	0.80	0.91	0.98	0.83	1.17	937	3.3
	NHS Chorley and South Ribble	167,900	0.70	0.81	0.78	0.83	0.89	0.94	0.80	1.11	876	2.9
	NHS East Lancashire	371,600	1.05	1.01	0.98	0.99	0.94	0.95	0.85	1.06	864	11.9
	<i>NHS Fylde & Wyre</i>	165,000	0.79	0.81	0.79	0.79	0.80	0.79	0.67	0.93	836	2.1
	NHS Greater Preston	202,000	0.91	0.87	0.86	0.82	0.88	0.86	0.73	1.01	748	14.7
	<i>NHS Lancashire North</i>	158,500	0.72	0.71	0.71	0.76	0.76	0.71	0.58	0.86	650	4.0
	<i>NHS West Lancashire</i>	110,900	0.87	0.91	0.91	0.87	0.83	0.78	0.63	0.97	748	1.9
Merseyside	NHS Halton	125,700	0.87	0.92	0.94	1.06	1.03	1.01	0.84	1.21	899	2.2
	NHS Knowsley	145,900	1.08	1.04	0.96	0.94	0.97	0.91	0.76	1.09	809	2.8
	NHS Liverpool	469,700	1.07	1.08	1.05	1.05	1.03	1.00	0.91	1.11	830	11.1
	NHS South Sefton	159,400	0.87	0.84	0.86	0.93	0.93	0.92	0.78	1.09	878	2.2
	<i>NHS Southport and Formby</i>	114,300	0.80	0.78	0.79	0.85	0.77	0.79	0.65	0.97	823	3.1
	<i>NHS St Helens</i>	176,100	0.87	0.88	0.89	0.87	0.88	0.84	0.71	0.99	795	2.0
Cumbria, Northumberland, Tyne and Wear	<i>NHS Cumbria</i>	505,200	0.76	0.73	0.73	0.72	0.72	0.74	0.67	0.81	748	1.5
	<i>NHS Gateshead</i>	200,200	0.84	0.87	0.85	0.83	0.85	0.78	0.67	0.92	729	3.7
	NHS Newcastle North and East	141,600	1.01	1.00	0.97	1.00	0.92	0.88	0.72	1.08	678	10.7
	NHS Newcastle West	140,900	1.02	0.99	0.89	0.83	0.89	0.88	0.72	1.06	724	18.3
	NHS North Tyneside	201,400	0.96	0.99	1.00	0.94	0.94	0.96	0.83	1.11	903	3.4

Table 2.5. Continued

UK area	Name	Total population	2008 O/E	2009 O/E	2010 O/E	2011 O/E	2012 O/E	2013			% non-White	
								O/E	95% LCL	95% UCL		Crude rate pmp
Cumbria cont.	<i>NHS Northumberland</i>	316,100	0.85	0.81	0.76	0.77	0.76	0.74	0.65	0.84	753	1.6
	NHS South Tyneside	148,400	1.01	1.09	1.00	1.02	0.96	0.90	0.76	1.08	856	4.1
	NHS Sunderland	275,700	1.01	0.98	1.00	0.96	0.96	0.91	0.80	1.03	841	4.1
North Yorkshire and Humber	<i>NHS East Riding of Yorkshire</i>	314,500	0.87	0.88	0.84	0.83	0.82	0.80	0.70	0.90	820	1.9
	<i>NHS Hambleton, Richmondshire and Whitby</i>	153,400	0.59	0.61	0.60	0.62	0.64	0.69	0.57	0.84	697	2.7
	<i>NHS Harrogate and Rural District</i>	158,600	0.83	0.87	0.84	0.83	0.87	0.84	0.71	1.00	820	3.7
	NHS Hull	257,200	0.99	1.04	1.02	1.00	0.95	0.96	0.84	1.10	797	5.9
	NHS North East Lincolnshire	159,700	1.01	1.00	0.98	1.07	1.03	1.00	0.86	1.18	927	2.6
	NHS North Lincolnshire	168,400	0.89	0.79	0.74	0.82	0.88	0.95	0.81	1.11	903	4.0
	NHS Scarborough and Ryedale	110,500	0.95	0.93	0.86	0.82	0.84	0.82	0.67	1.01	842	2.5
	NHS Vale of York	346,100	0.84	0.85	0.88	0.90	0.95	0.95	0.85	1.06	881	4.0
South Yorkshire and Bassetlaw	NHS Barnsley	233,700	1.07	1.11	1.14	1.11	1.06	1.04	0.91	1.18	967	2.1
	NHS Bassetlaw	113,200	0.91	0.85	0.83	0.83	0.88	0.82	0.67	1.01	804	2.6
	NHS Doncaster	302,700	0.95	0.96	0.93	0.97	0.96	0.92	0.82	1.04	842	4.7
	NHS Rotherham	258,400	1.10	1.07	1.12	1.06	1.05	1.03	0.91	1.17	956	6.4
	NHS Sheffield	557,400	1.11	1.11	1.14	1.11	1.12	1.11	1.02	1.21	924	16.3
West Yorkshire	<i>NHS Airedale, Wharfedale and Craven</i>	158,200	0.77	0.83	0.82	0.78	0.78	0.80	0.67	0.95	765	11.1
	NHS Bradford City	82,300	2.00	1.80	1.96	1.88	1.98	2.00	1.64	2.44	1,154	72.2
	NHS Bradford Districts	333,500	1.14	1.10	1.13	1.15	1.23	1.21	1.09	1.35	977	28.7
	NHS Calderdale	205,300	1.07	1.07	1.09	1.03	0.96	0.90	0.78	1.05	818	10.3
	NHS Greater Huddersfield	238,800	0.98	0.92	0.96	0.94	0.98	0.95	0.82	1.09	842	17.4
	<i>NHS Leeds North</i>	199,600	0.98	0.93	0.93	0.92	0.88	0.82	0.70	0.97	752	17.4
	NHS Leeds South and East	238,300	0.94	0.95	0.96	0.99	0.97	0.99	0.86	1.14	797	18.3
	<i>NHS Leeds West</i>	319,800	0.85	0.86	0.86	0.83	0.82	0.88	0.77	1.00	685	10.8
	NHS North Kirklees	186,700	1.11	1.20	1.19	1.21	1.16	1.24	1.08	1.43	1,039	25.3
	<i>NHS Wakefield</i>	327,600	0.81	0.81	0.81	0.83	0.85	0.84	0.74	0.95	778	4.6
Arden, Herefordshire and Worcestershire	NHS Coventry and Rugby	423,900	1.14	1.19	1.25	1.27	1.33	1.29	1.18	1.42	1,066	22.2
	<i>NHS Herefordshire</i>	184,900	0.81	0.83	0.78	0.79	0.78	0.77	0.65	0.91	779	1.8
	NHS Redditch and Bromsgrove	178,700	0.94	0.96	0.95	0.93	0.97	0.92	0.79	1.08	867	6.0
	<i>NHS South Warwickshire</i>	259,200	0.93	0.94	0.90	0.91	0.87	0.86	0.75	0.98	829	7.0
	<i>NHS South Worcestershire</i>	292,300	0.78	0.79	0.81	0.81	0.84	0.80	0.71	0.91	790	3.7
	NHS Warwickshire North	188,000	1.08	1.09	1.11	1.08	1.00	1.00	0.86	1.16	936	6.5
	NHS Wyre Forest	98,100	0.95	0.92	0.91	0.93	0.88	0.86	0.69	1.06	867	2.8
Birmingham and the Black Country	NHS Birmingham CrossCity	721,400	1.50	1.51	1.46	1.46	1.47	1.44	1.35	1.55	1,123	35.2
	NHS Birmingham South and Central	199,600	1.60	1.66	1.62	1.65	1.70	1.70	1.50	1.92	1,257	40.4
	NHS Dudley	313,600	0.90	0.96	0.95	0.88	0.93	0.95	0.84	1.07	887	10.0
	NHS Sandwell and West Birmingham	475,700	1.80	1.84	1.81	1.77	1.74	1.72	1.59	1.86	1,320	45.3
	<i>NHS Solihull</i>	207,400	0.91	0.97	0.94	0.90	0.86	0.84	0.72	0.97	791	10.9
	NHS Walsall	270,900	1.29	1.27	1.34	1.32	1.29	1.30	1.16	1.45	1,141	21.1
Derbyshire and Nottinghamshire	NHS Erewash	94,600	0.96	1.00	0.97	1.00	0.97	0.93	0.75	1.15	856	3.2
	<i>NHS Hardwick</i>	108,900	0.93	0.91	0.85	0.78	0.79	0.77	0.62	0.95	744	1.8
	NHS Mansfield & Ashfield	192,500	1.01	0.96	0.94	0.93	0.89	0.90	0.77	1.05	831	2.5
	NHS Newark & Sherwood	115,900	1.13	1.03	1.01	1.08	1.03	0.99	0.82	1.19	966	2.4
	<i>NHS North Derbyshire</i>	272,100	0.87	0.81	0.80	0.81	0.80	0.78	0.68	0.89	783	2.5
	NHS Nottingham City	308,700	1.12	1.17	1.26	1.20	1.18	1.19	1.05	1.34	862	28.5
	<i>NHS Nottingham North & East</i>	146,200	0.89	0.84	0.84	0.86	0.85	0.82	0.68	0.98	773	6.2
	NHS Nottingham West	110,700	1.00	1.10	1.11	1.05	1.07	1.13	0.94	1.35	1,075	7.3
	<i>NHS Rushcliffe</i>	111,600	0.93	0.91	0.87	0.87	0.78	0.80	0.65	0.99	771	6.9
	NHS Southern Derbyshire	515,300	1.03	1.05	1.03	1.02	0.98	0.98	0.90	1.08	883	11.0

Table 2.5. Continued

UK area	Name	Total population	2008 O/E	2009 O/E	2010 O/E	2011 O/E	2012 O/E	2013			% non-White	
								O/E	95% LCL	95% UCL		Crude rate pmp
East Anglia	NHS Cambridgeshire and Peterborough	849,000	0.86	0.90	0.91	0.95	0.91	0.95	0.88	1.02	834	9.5
	NHS Great Yarmouth & Waveney	213,200	0.84	0.93	0.98	0.97	0.94	0.96	0.84	1.10	966	2.7
	<i>NHS Ipswich and East Suffolk</i>	<i>395,700</i>	<i>0.86</i>	<i>0.85</i>	<i>0.83</i>	<i>0.83</i>	<i>0.81</i>	<i>0.85</i>	<i>0.76</i>	<i>0.94</i>	<i>816</i>	<i>5.6</i>
	NHS North Norfolk	167,900	1.05	0.95	0.91	0.86	0.83	0.92	0.79	1.07	1,012	1.5
	NHS Norwich	193,400	0.97	0.96	0.95	0.89	0.86	0.92	0.79	1.08	802	7.3
	NHS South Norfolk	235,200	0.83	0.83	0.79	0.79	0.82	0.88	0.77	1.01	880	2.6
	<i>NHS West Norfolk</i>	<i>171,300</i>	<i>0.90</i>	<i>0.89</i>	<i>0.84</i>	<i>0.78</i>	<i>0.75</i>	<i>0.75</i>	<i>0.63</i>	<i>0.89</i>	<i>777</i>	<i>2.6</i>
	<i>NHS West Suffolk</i>	<i>221,000</i>	<i>0.76</i>	<i>0.80</i>	<i>0.84</i>	<i>0.82</i>	<i>0.80</i>	<i>0.81</i>	<i>0.69</i>	<i>0.94</i>	<i>760</i>	<i>4.6</i>
Essex	NHS Basildon and Brentwood	250,500	0.91	0.92	0.92	0.94	0.92	1.00	0.88	1.14	906	7.1
	NHS Castle Point, Rayleigh and Rochford	172,100	0.88	0.89	0.87	0.82	0.81	0.86	0.73	1.01	866	3.0
	<i>NHS Mid Essex</i>	<i>379,600</i>	<i>0.86</i>	<i>0.87</i>	<i>0.84</i>	<i>0.83</i>	<i>0.80</i>	<i>0.84</i>	<i>0.75</i>	<i>0.94</i>	<i>790</i>	<i>4.4</i>
	<i>NHS North East Essex</i>	<i>314,300</i>	<i>0.92</i>	<i>0.90</i>	<i>0.89</i>	<i>0.91</i>	<i>0.89</i>	<i>0.86</i>	<i>0.77</i>	<i>0.98</i>	<i>830</i>	<i>5.5</i>
	NHS Southend	174,800	0.98	0.93	0.90	0.90	0.89	0.96	0.82	1.12	869	8.4
	NHS Thurrock	159,500	1.04	0.94	0.98	0.99	0.99	1.00	0.84	1.18	815	14.1
	<i>NHS West Essex</i>	<i>290,000</i>	<i>0.71</i>	<i>0.73</i>	<i>0.76</i>	<i>0.75</i>	<i>0.84</i>	<i>0.88</i>	<i>0.77</i>	<i>1.00</i>	<i>803</i>	<i>8.2</i>
Hertfordshire and the South Midlands	NHS Bedfordshire	419,200	0.87	0.86	0.90	0.87	0.91	0.92	0.83	1.03	833	11.2
	NHS Corby	63,100	0.70	0.85	0.84	0.91	0.94	0.83	0.62	1.12	698	4.5
	<i>NHS East and North Hertfordshire</i>	<i>540,700</i>	<i>0.83</i>	<i>0.84</i>	<i>0.85</i>	<i>0.88</i>	<i>0.87</i>	<i>0.89</i>	<i>0.81</i>	<i>0.98</i>	<i>782</i>	<i>10.4</i>
	NHS Herts Valleys	569,900	0.98	0.97	0.98	0.96	0.95	0.94	0.86	1.03	821	14.6
	NHS Luton	205,800	1.26	1.23	1.27	1.36	1.38	1.46	1.28	1.67	1,098	45.3
	NHS Milton Keynes	257,900	0.92	0.90	0.92	0.94	0.94	0.95	0.83	1.10	768	19.6
	<i>NHS Nene</i>	<i>621,800</i>	<i>0.92</i>	<i>0.92</i>	<i>0.91</i>	<i>0.92</i>	<i>0.91</i>	<i>0.91</i>	<i>0.83</i>	<i>0.99</i>	<i>811</i>	<i>9.1</i>
Leicestershire and Lincolnshire	<i>NHS East Leicestershire and Rutland</i>	<i>319,500</i>	<i>0.86</i>	<i>0.82</i>	<i>0.82</i>	<i>0.81</i>	<i>0.81</i>	<i>0.80</i>	<i>0.71</i>	<i>0.91</i>	<i>773</i>	<i>9.8</i>
	NHS Leicester City	331,600	1.66	1.68	1.71	1.73	1.75	1.77	1.61	1.94	1,306	49.5
	<i>NHS Lincolnshire East</i>	<i>228,100</i>	<i>0.87</i>	<i>0.83</i>	<i>0.82</i>	<i>0.83</i>	<i>0.85</i>	<i>0.87</i>	<i>0.76</i>	<i>0.99</i>	<i>921</i>	<i>2.0</i>
	<i>NHS Lincolnshire West</i>	<i>227,700</i>	<i>0.87</i>	<i>0.87</i>	<i>0.84</i>	<i>0.87</i>	<i>0.82</i>	<i>0.84</i>	<i>0.73</i>	<i>0.98</i>	<i>782</i>	<i>3.0</i>
	<i>NHS South Lincolnshire</i>	<i>141,000</i>	<i>0.64</i>	<i>0.64</i>	<i>0.70</i>	<i>0.71</i>	<i>0.72</i>	<i>0.68</i>	<i>0.56</i>	<i>0.83</i>	<i>681</i>	<i>2.3</i>
	<i>NHS South West Lincolnshire</i>	<i>122,000</i>	<i>0.66</i>	<i>0.69</i>	<i>0.76</i>	<i>0.77</i>	<i>0.77</i>	<i>0.75</i>	<i>0.61</i>	<i>0.92</i>	<i>738</i>	<i>2.3</i>
	<i>NHS West Leicestershire</i>	<i>374,200</i>	<i>0.89</i>	<i>0.91</i>	<i>0.91</i>	<i>0.93</i>	<i>0.90</i>	<i>0.91</i>	<i>0.82</i>	<i>1.02</i>	<i>850</i>	<i>6.9</i>
Shropshire and Staffordshire	NHS Cannock Chase	132,800	1.06	0.96	0.92	0.96	0.87	0.94	0.78	1.13	873	2.4
	<i>NHS East Staffordshire</i>	<i>123,900</i>	<i>0.83</i>	<i>0.75</i>	<i>0.79</i>	<i>0.76</i>	<i>0.75</i>	<i>0.77</i>	<i>0.62</i>	<i>0.95</i>	<i>710</i>	<i>9.0</i>
	NHS North Staffordshire	213,200	0.89	0.93	0.89	0.94	0.90	0.90	0.78	1.04	877	3.5
	<i>NHS Shropshire</i>	<i>308,200</i>	<i>0.92</i>	<i>0.90</i>	<i>0.86</i>	<i>0.84</i>	<i>0.83</i>	<i>0.78</i>	<i>0.69</i>	<i>0.89</i>	<i>785</i>	<i>2.0</i>
	NHS South East Staffs and Seisdon & Peninsular	222,800	1.01	0.98	0.97	0.99	0.91	0.89	0.78	1.03	866	3.6
	NHS Stafford and Surrounds	151,100	0.75	0.79	0.85	0.87	0.88	0.86	0.72	1.02	853	4.7
	NHS Stoke on Trent	258,100	1.07	1.12	1.12	1.12	1.08	1.08	0.95	1.22	941	11.0
	NHS Telford & Wrekin	167,700	0.98	1.03	1.04	1.04	1.01	1.04	0.89	1.22	901	7.3
London	NHS Barking & Dagenham	190,600	1.15	1.24	1.33	1.45	1.52	1.52	1.33	1.75	1,055	41.7
	NHS Barnet	364,000	1.44	1.41	1.48	1.48	1.52	1.50	1.37	1.65	1,195	35.9
	NHS Camden	225,000	1.16	1.19	1.23	1.24	1.22	1.25	1.09	1.43	942	33.7
	NHS City and Hackney	259,700	1.28	1.35	1.47	1.51	1.59	1.60	1.43	1.80	1,074	44.6
	NHS Enfield	317,300	1.40	1.39	1.40	1.50	1.53	1.52	1.38	1.69	1,185	39.0
	NHS Haringey	258,900	1.40	1.40	1.41	1.54	1.65	1.74	1.56	1.93	1,259	39.5
	<i>NHS Havering</i>	<i>239,700</i>	<i>0.83</i>	<i>0.86</i>	<i>0.83</i>	<i>0.88</i>	<i>0.90</i>	<i>0.84</i>	<i>0.73</i>	<i>0.97</i>	<i>763</i>	<i>12.3</i>
	NHS Islington	211,000	1.19	1.24	1.28	1.38	1.52	1.56	1.37	1.77	1,118	31.8
	NHS Newham	314,100	1.45	1.50	1.69	1.80	1.85	1.95	1.77	2.16	1,242	71.0
	NHS Redbridge	284,600	1.27	1.32	1.39	1.37	1.44	1.50	1.34	1.67	1,145	57.5
	NHS Tower Hamlets	263,000	1.21	1.31	1.38	1.40	1.51	1.63	1.44	1.84	992	54.8
	NHS Waltham Forest	262,600	1.41	1.38	1.45	1.54	1.50	1.54	1.37	1.73	1,127	47.8
	NHS Brent	314,700	1.94	2.05	2.17	2.18	2.20	2.19	2.01	2.38	1,656	63.7
	NHS Central London (Westminster)	161,000	1.00	1.01	1.04	1.10	1.14	1.21	1.03	1.41	987	36.2
	NHS Ealing	340,700	1.86	1.86	1.89	1.87	1.93	1.91	1.75	2.08	1,465	51.0

Table 2.5. Continued

UK area	Name	Total population	2008 O/E	2009 O/E	2010 O/E	2011 O/E	2012 O/E	2013			% non-White	
								O/E	95% LCL	95% UCL		Crude rate pmp
London cont.	NHS Hammersmith and Fulham	179,900	1.22	1.29	1.27	1.29	1.32	1.26	1.08	1.47	923	31.9
	NHS Harrow	242,400	1.68	1.76	1.83	1.88	1.87	1.79	1.61	1.98	1,485	57.8
	NHS Hillingdon	281,800	1.31	1.35	1.37	1.45	1.47	1.49	1.34	1.66	1,182	39.4
	NHS Hounslow	259,100	1.40	1.43	1.49	1.55	1.58	1.67	1.50	1.87	1,274	48.6
	NHS West London (Kensington and Chelsea, Queen's Park and Paddington)	218,800	1.17	1.24	1.26	1.28	1.26	1.23	1.08	1.41	1,001	33.4
	NHS Bexley	234,300	1.17	1.23	1.25	1.27	1.26	1.25	1.10	1.41	1,080	18.1
	NHS Bromley	314,000	1.05	1.01	1.04	1.02	0.99	0.99	0.88	1.12	888	15.7
	NHS Croydon	368,900	1.30	1.34	1.32	1.36	1.41	1.47	1.33	1.61	1,168	44.9
	NHS Greenwich	260,100	1.15	1.17	1.28	1.29	1.29	1.43	1.27	1.61	1,046	37.5
	NHS Kingston	163,900	1.19	1.18	1.15	1.16	1.17	1.10	0.94	1.30	885	25.5
	NHS Lambeth	310,200	1.58	1.64	1.62	1.70	1.76	1.77	1.60	1.96	1,235	42.9
	NHS Lewisham	281,600	1.52	1.63	1.59	1.64	1.67	1.68	1.51	1.87	1,232	46.5
	NHS Merton	202,200	1.19	1.27	1.28	1.31	1.37	1.33	1.16	1.52	1,043	35.1
	<i>NHS Richmond</i>	<i>189,100</i>	<i>0.69</i>	<i>0.75</i>	<i>0.76</i>	<i>0.76</i>	<i>0.75</i>	<i>0.78</i>	<i>0.66</i>	<i>0.93</i>	<i>666</i>	<i>14.0</i>
	NHS Southwark	293,500	1.67	1.67	1.74	1.82	1.86	1.92	1.74	2.12	1,349	45.8
	NHS Sutton	193,600	1.20	1.19	1.21	1.21	1.23	1.18	1.02	1.35	1,002	21.4
NHS Wandsworth	308,300	1.27	1.36	1.37	1.32	1.26	1.24	1.10	1.39	882	28.6	
Bath, Gloucestershire, Swindon and Wiltshire	<i>NHS Bath and North East Somerset</i>	<i>177,600</i>	<i>0.82</i>	<i>0.83</i>	<i>0.84</i>	<i>0.79</i>	<i>0.79</i>	<i>0.80</i>	<i>0.67</i>	<i>0.95</i>	<i>721</i>	<i>5.4</i>
	<i>NHS Gloucestershire</i>	<i>602,200</i>	<i>0.84</i>	<i>0.88</i>	<i>0.87</i>	<i>0.88</i>	<i>0.89</i>	<i>0.88</i>	<i>0.80</i>	<i>0.96</i>	<i>837</i>	<i>4.6</i>
	NHS Swindon	217,200	0.86	0.87	0.91	0.94	0.96	0.98	0.85	1.14	847	10.0
	<i>NHS Wiltshire</i>	<i>476,800</i>	<i>0.77</i>	<i>0.74</i>	<i>0.74</i>	<i>0.75</i>	<i>0.72</i>	<i>0.73</i>	<i>0.65</i>	<i>0.81</i>	<i>686</i>	<i>3.4</i>
Bristol, North Somerset, Somerset and South Gloucestershire	NHS Bristol	432,500	1.29	1.26	1.23	1.24	1.27	1.31	1.19	1.44	1,020	16.0
	NHS North Somerset	204,400	0.94	0.89	0.86	0.86	0.89	0.89	0.77	1.03	881	2.7
	<i>NHS Somerset</i>	<i>535,000</i>	<i>0.84</i>	<i>0.84</i>	<i>0.87</i>	<i>0.87</i>	<i>0.84</i>	<i>0.82</i>	<i>0.74</i>	<i>0.90</i>	<i>815</i>	<i>2.0</i>
	NHS South Gloucestershire	266,100	0.97	0.92	0.98	0.94	0.94	0.99	0.87	1.12	902	5.0
Devon, Cornwall and Isles of Scilly	NHS Kernow	540,200	1.00	1.01	0.99	0.95	0.94	0.94	0.86	1.02	952	1.8
	<i>NHS North, East, West Devon</i>	<i>869,400</i>	<i>0.96</i>	<i>0.95</i>	<i>0.94</i>	<i>0.93</i>	<i>0.93</i>	<i>0.92</i>	<i>0.86</i>	<i>0.99</i>	<i>894</i>	<i>3.0</i>
	NHS South Devon and Torbay	273,300	0.96	0.97	1.02	1.00	0.98	1.03	0.92	1.16	1,083	2.1
Kent and Medway	NHS Ashford	120,100	1.03	1.06	1.04	1.02	1.04	1.00	0.83	1.21	907	6.3
	NHS Canterbury and Coastal	200,300	0.90	1.00	0.99	0.96	0.95	0.98	0.85	1.13	894	5.9
	NHS Dartford, Gravesham and Swanley	249,200	1.04	1.08	1.07	1.02	1.04	1.07	0.94	1.22	947	13.0
	NHS Medway	268,200	0.90	0.89	0.89	0.91	0.94	0.99	0.87	1.13	839	10.4
	<i>NHS South Kent Coast</i>	<i>203,000</i>	<i>0.79</i>	<i>0.80</i>	<i>0.82</i>	<i>0.85</i>	<i>0.83</i>	<i>0.78</i>	<i>0.67</i>	<i>0.91</i>	<i>764</i>	<i>4.5</i>
	NHS Swale	108,200	1.02	1.00	1.00	1.02	1.11	1.11	0.92	1.34	998	3.8
	NHS Thanet	135,700	1.01	0.89	1.01	1.03	1.09	1.15	0.98	1.35	1,106	4.5
	<i>NHS West Kent</i>	<i>463,700</i>	<i>0.82</i>	<i>0.82</i>	<i>0.77</i>	<i>0.79</i>	<i>0.81</i>	<i>0.79</i>	<i>0.71</i>	<i>0.88</i>	<i>725</i>	<i>4.9</i>
Surrey and Sussex	<i>NHS Brighton & Hove</i>	<i>275,800</i>	<i>0.88</i>	<i>0.87</i>	<i>0.85</i>	<i>0.85</i>	<i>0.89</i>	<i>0.85</i>	<i>0.74</i>	<i>0.98</i>	<i>693</i>	<i>10.9</i>
	<i>NHS Coastal West Sussex</i>	<i>476,700</i>	<i>0.88</i>	<i>0.86</i>	<i>0.84</i>	<i>0.80</i>	<i>0.82</i>	<i>0.81</i>	<i>0.74</i>	<i>0.90</i>	<i>831</i>	<i>3.8</i>
	NHS Crawley	108,300	1.08	1.08	1.22	1.11	1.05	1.03	0.84	1.27	831	20.1
	NHS East Surrey	175,900	0.81	0.78	0.82	0.76	0.83	0.87	0.74	1.03	790	8.3
	<i>NHS Eastbourne, Hailsham and Seaford</i>	<i>182,000</i>	<i>0.86</i>	<i>0.75</i>	<i>0.78</i>	<i>0.74</i>	<i>0.80</i>	<i>0.82</i>	<i>0.70</i>	<i>0.96</i>	<i>835</i>	<i>4.4</i>
	<i>NHS Guildford and Waverley</i>	<i>205,900</i>	<i>0.71</i>	<i>0.72</i>	<i>0.71</i>	<i>0.66</i>	<i>0.74</i>	<i>0.70</i>	<i>0.59</i>	<i>0.83</i>	<i>631</i>	<i>7.2</i>
	<i>NHS Hastings & Rother</i>	<i>181,400</i>	<i>0.82</i>	<i>0.76</i>	<i>0.79</i>	<i>0.75</i>	<i>0.73</i>	<i>0.77</i>	<i>0.66</i>	<i>0.91</i>	<i>783</i>	<i>4.6</i>
	<i>NHS High Weald Lewes Havens</i>	<i>167,800</i>	<i>0.69</i>	<i>0.73</i>	<i>0.66</i>	<i>0.68</i>	<i>0.76</i>	<i>0.72</i>	<i>0.60</i>	<i>0.86</i>	<i>721</i>	<i>3.1</i>
	<i>NHS Horsham and Mid Sussex</i>	<i>223,300</i>	<i>0.73</i>	<i>0.76</i>	<i>0.73</i>	<i>0.77</i>	<i>0.71</i>	<i>0.73</i>	<i>0.62</i>	<i>0.85</i>	<i>681</i>	<i>4.9</i>
	NHS North West Surrey	338,200	1.01	0.98	0.96	0.96	0.96	0.95	0.85	1.06	858	12.5
	NHS Surrey Downs	282,700	0.85	0.90	0.91	0.91	0.89	0.89	0.78	1.01	845	9.1
NHS Surrey Heath	94,100	1.04	0.98	0.97	0.94	0.94	0.87	0.69	1.09	808	9.3	

Table 2.5. Continued

UK area	Name	Total population	2008 O/E	2009 O/E	2010 O/E	2011 O/E	2012 O/E	2013			% non-White	
								O/E	95% LCL	95% UCL		Crude rate pmp
Thames Valley	NHS Aylesbury Vale	196,400	1.07	1.00	1.00	0.97	0.96	0.94	0.81	1.09	850	9.7
	NHS Bracknell and Ascot	132,900	0.83	0.84	0.86	0.85	0.84	0.95	0.79	1.15	812	9.5
	<i>NHS Chiltern</i>	317,900	0.89	0.90	0.88	0.84	0.83	0.87	0.77	0.98	799	15.8
	NHS Newbury and District	105,100	1.09	1.10	1.00	1.05	1.00	1.04	0.85	1.26	932	4.4
	NHS North & West Reading	99,300	0.96	0.88	0.87	0.85	0.82	0.84	0.67	1.05	765	10.4
	<i>NHS Oxfordshire</i>	647,100	0.89	0.87	0.89	0.92	0.92	0.91	0.84	1.00	802	9.3
	NHS Slough	141,800	1.81	1.81	1.88	1.98	2.02	2.01	1.76	2.31	1,431	54.3
	NHS South Reading	107,200	1.73	1.69	1.65	1.56	1.49	1.61	1.35	1.92	1,129	30.5
	NHS Windsor, Ascot and Maidenhead	139,000	0.83	0.92	0.96	0.98	0.99	1.01	0.85	1.21	892	14.7
NHS Wokingham	156,700	0.91	0.93	0.87	0.95	0.92	0.92	0.77	1.09	830	11.6	
Wessex	<i>NHS Dorset</i>	750,300	0.88	0.86	0.84	0.81	0.80	0.79	0.73	0.86	794	4.0
	NHS Fareham and Gosport	196,100	0.82	0.85	0.87	0.87	0.86	0.91	0.78	1.06	872	3.4
	<i>NHS Isle of Wight</i>	138,700	0.61	0.58	0.58	0.63	0.67	0.78	0.65	0.94	814	2.7
	NHS North East Hampshire and Farnham	206,800	0.77	0.85	0.85	0.84	0.85	0.89	0.77	1.04	784	9.7
	<i>NHS North Hampshire</i>	216,200	0.67	0.70	0.72	0.68	0.67	0.69	0.58	0.81	620	6.4
	NHS Portsmouth	206,800	0.95	0.92	0.90	0.95	0.97	1.02	0.87	1.19	803	11.6
	<i>NHS South Eastern Hampshire</i>	209,100	0.87	0.88	0.89	0.88	0.82	0.85	0.73	0.98	832	3.1
	NHS Southampton	239,400	0.96	0.93	0.98	1.01	1.04	1.02	0.88	1.17	781	14.1
<i>NHS West Hampshire</i>	544,400	0.79	0.79	0.76	0.76	0.75	0.76	0.69	0.83	742	3.9	
Wales	<i>Betsi Cadwaladr University</i>	690,400	0.95	0.93	0.90	0.86	0.87	0.80	0.73	0.87	773	2.5
	<i>Powys Teaching</i>	133,000	0.90	0.94	0.89	0.86	0.86	0.83	0.69	1.00	872	1.6
	Hywel Dda	383,400	1.04	0.99	0.94	0.95	0.89	0.94	0.85	1.04	929	2.2
	Abertawe Bro Morgannwg University	519,500	1.21	1.23	1.25	1.24	1.22	1.16	1.07	1.26	1,080	3.9
	Cwm Taf	294,500	1.40	1.37	1.30	1.35	1.28	1.26	1.13	1.40	1,141	2.6
	Aneurin Bevan	578,000	1.11	1.09	1.12	1.11	1.10	1.08	0.99	1.17	997	3.9
Cardiff and Vale University	475,300	1.05	1.06	1.07	1.06	1.04	1.04	0.95	1.15	863	12.2	
Scotland	Ayrshire and Arran	373,200	1.10	1.05	1.04	0.99	0.96	0.92	0.83	1.03	906	1.2
	<i>Borders</i>	113,700	0.86	0.89	0.94	0.84	0.80	0.77	0.63	0.95	800	1.3
	<i>Dumfries and Galloway</i>	150,800	0.90	0.86	0.82	0.80	0.80	0.73	0.60	0.87	756	1.2
	Fife	366,200	0.89	0.89	0.91	0.94	0.91	0.90	0.81	1.01	849	2.4
	<i>Forth Valley</i>	299,100	0.90	0.89	0.92	0.86	0.84	0.84	0.74	0.96	779	2.2
	<i>Grampian</i>	573,400	0.92	0.89	0.89	0.88	0.92	0.90	0.82	0.99	821	4.0
	Greater Glasgow and Clyde	1,217,000	1.08	1.05	1.02	1.02	1.04	1.02	0.96	1.08	905	7.3
	<i>Highland</i>	319,800	1.00	0.97	0.93	0.85	0.81	0.78	0.69	0.88	785	1.3
	Lanarkshire	572,500	0.92	0.92	0.93	0.91	0.96	0.93	0.85	1.02	852	2.0
	<i>Lothian</i>	843,700	0.88	0.85	0.82	0.77	0.78	0.76	0.70	0.83	665	5.6
	Orkney	21,500	1.06	0.96	0.87	0.74	0.76	0.82	0.52	1.31	836	0.7
	<i>Shetland</i>	23,200	0.50	0.53	0.56	0.49	0.48	0.50	0.28	0.91	474	1.5
	Tayside	411,700	1.02	1.03	1.00	0.99	0.95	0.93	0.84	1.03	882	3.2
	<i>Western Isles</i>	27,600	0.68	0.65	0.78	0.68	0.58	0.56	0.34	0.91	581	0.9
Northern Ireland	Belfast	348,300	1.20	1.13	1.13	1.10	1.12	1.11	1.00	1.24	919	3.2
	Northern	465,500	1.08	1.02	0.99	1.02	1.00	0.99	0.90	1.09	853	1.2
	Southern	363,100	0.97	0.96	0.98	1.00	0.95	0.95	0.84	1.07	763	1.2
	<i>South Eastern</i>	350,100	0.96	0.93	0.86	0.88	0.86	0.84	0.74	0.95	740	1.3
	Western	296,600	1.10	1.12	1.10	1.06	0.95	0.93	0.82	1.06	769	1.0

80 years. Crude prevalence rates in males exceeded those of females for all age groups, peaking in age group 75–79 years at 3,010 pmp and for females also in age group 75–79 years at 1,560 pmp. Survival on RRT is described in chapter 5.

Ethnicity

Sixty one of the 71 centres (86%) provided ethnicity data that were at least 90% complete (table 2.10), an improvement compared with 59 of 71 (83.1%) in 2012 and 36 centres in 2006. Ethnicity completeness for

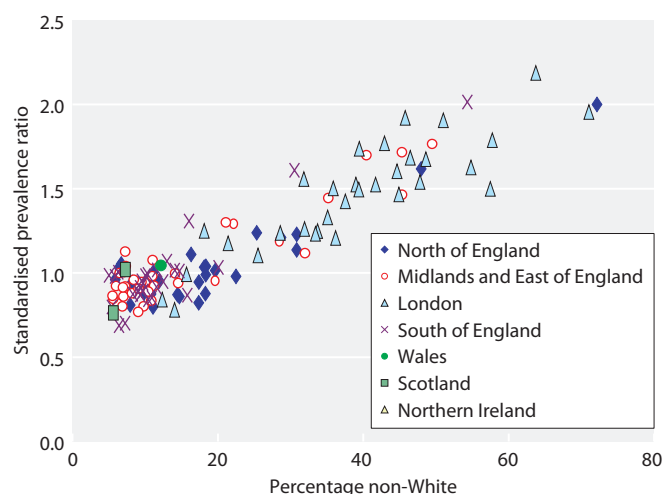


Fig. 2.3. Standardised prevalence ratios for CCG/HB areas by percentage non-White on 31/12/2013 (excluding areas with <5% ethnic minorities)

prevalent RRT patients improved in the UK from 92.0% in 2012 to 92.8% in 2013, with 98.7% ethnicity completeness in England, 99.9% completeness in Wales and 100% in Northern Ireland. Completeness of ethnicity data was highest in prevalent transplant patients. This may relate to the fact that the intensive work-up for transplantation may increase the recording of data. Completeness of ethnicity data from Scotland was low at 24%.

In 2013, 21.1% of the prevalent UK RRT population (with ethnicity assigned) were from ethnic minorities (23.1% in England). The proportion of the prevalent UK RRT population (with ethnicity assigned) from ethnic minorities in Wales, Scotland and Northern Ireland were very small, although it should be noted that there was a high level of missing ethnicity data in Scotland. The ONS estimates that approximately 14% of the UK general population are designated as belonging to an ethnic minority

Table 2.7. Median time on RRT of prevalent patients on 31/12/2013

Modality	N	Median time treated (years)
Haemodialysis	23,290	3.4
Peritoneal dialysis	3,633	1.7
Transplant	28,276	10.1
All RRT	55,199	6.0

For patients who recovered for >90 days and then subsequently restarted RRT the median time from the start of RRT was 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 was not accurately known

[3]. The relative proportion of patients reported to the UKRR as receiving RRT and belonging to an ethnic minority has increased from 14.9% in 2007 which may be due to improvements in coding and reporting of ethnicity data as well as an increasing incidence of ERF and increased referral rates in these populations.

Amongst the centres with more than 50% returns there was wide variation in the proportion of patients from ethnic minorities, ranging from 0.5% in two centres (Truro and Newry) to over 55% in two centres: London St Bartholemew's (61%) and London West (56.4%).

Primary renal diagnosis

Data for primary renal diagnosis (PRD) were not complete for 2.9% of patients (table 2.11) and there remained a marked inter-centre difference in completeness of data returns. Only one centre had $\geq 40\%$ primary renal diagnosis data coded as uncertain and has been excluded from the between centre analysis and other analyses where PRD is included in the case-mix adjustment (Colchester, 52% uncertain PRD); the UK and national totals have been appropriately adjusted. The

Table 2.6. Standardised prevalence rate ratio of RRT for each Strategic Health Authority in England and for Wales, Scotland and Northern Ireland in 2013

UK Area	Total population	O/E	95% LCL	95% UCL	Crude rate pmp
North England	15,149,700	0.93	0.91	0.94	834.9
Midlands and East of England	16,229,200	0.99	0.97	1.00	892.2
London	8,308,400	1.49	1.46	1.52	1,133.4
South England	13,806,400	0.90	0.88	0.92	836.6
Wales	3,074,100	1.01	0.97	1.05	939.8
Scotland	5,313,600	0.89	0.86	0.91	821.9
Northern Ireland	1,823,600	0.97	0.92	1.01	812.1

O/E – observed/expected prevalence rate ratio given the age/gender breakdown of each region

Bold – higher than expected prevalence rate ratio

Table 2.8. Median age of prevalent RRT patients by treatment modality in renal centres on 31/12/2013

Centre	Median age				Centre	Median age			
	HD	PD	Transplant	RRT		HD	PD	Transplant	RRT
England					Prestn	64.9	64.6	53.3	59.2
B Heart	67.3	54.9	51.6	63.5	Redng	69.5	60.3	56.8	61.1
B QEH	64.0	59.5	51.8	57.4	Salford	63.2	59.7	52.2	58.0
Basldn	67.5	63.3	52.6	62.8	Sheff	66.3	63.4	52.1	58.5
Bradfd	60.1	53.8	51.4	54.5	Shrew	66.7	59.7	54.7	61.6
Brightn	67.8	66.2	54.8	61.9	Stevng	67.1	66.6	52.5	60.7
Bristol	70.4	56.2	53.8	59.0	Sthend	72.5	64.1	54.8	64.7
Camb	73.6	73.7	53.0	59.2	Stoke	67.4	68.7	50.9	59.7
Carlis	68.2	68.0	53.5	59.5	Sund	64.5	68.8	54.0	57.7
Carsh	69.0	64.5	53.4	62.1	Truro	70.8	64.0	57.5	63.9
Chelms	70.9	65.0	59.3	64.8	Wirral	67.1	55.9	61.5	65.6
Colchr	69.9			69.9	Wolve	66.8	60.8	50.5	59.4
Covnt	66.9	67.4	51.7	58.0	York	69.1	59.0	52.4	58.2
Derby	67.6	62.8	55.2	61.9	N Ireland				
Donc	66.6	64.9	55.9	64.0	Antrim	70.7	67.8	52.4	64.2
Dorset	72.0	69.6	57.1	65.0	Belfast	66.0	61.1	51.2	54.1
Dudley	70.1	57.3	57.8	63.9	Newry	65.2	70.8	53.4	60.1
Exeter	73.3	68.2	53.8	62.8	Ulster	74.3	62.9	53.7	67.7
Glouc	70.7	65.8	53.3	64.7	West NI	68.6	73.0	50.2	59.1
Hull	67.9	62.7	52.4	58.9	Scotland				
Ipswi	66.4	67.6	55.1	60.2	Abrdn	65.5	60.0	51.0	57.6
Kent	70.5	63.9	53.8	61.1	Airdrie	64.6	67.1	51.9	58.3
L Barts	60.6	61.3	50.6	55.1	D & Gall	67.3	66.6	52.5	56.9
L Guys	62.3	64.4	50.5	54.4	Dundee	67.8	63.5	52.8	60.6
L Kings	63.7	60.4	53.3	58.3	Edinb	58.7	66.2	52.1	54.8
L Rfree	67.5	58.7	51.6	56.8	Glasgw	66.9	61.5	52.5	56.7
L St.G	66.1	68.7	54.0	59.4	Inverns	69.0	63.8	49.3	55.4
L West	65.8	66.7	54.3	58.9	Klmarnk	65.9	63.6	52.2	58.6
Leeds	65.6	58.7	52.9	56.8	Krkldy	69.2	65.3	52.3	61.7
Leic	66.7	64.8	52.9	59.4	Wales				
Liv Ain	68.6	56.5	49.6	66.5	Bangor	67.2	69.5		67.4
Liv Roy	61.6	55.7	52.5	54.8	Cardff	68.8	64.9	52.6	57.3
M RI	61.5	64.5	50.8	54.1	Clwyd	66.9	73.0	58.4	64.5
Middlbr	67.1	60.0	53.5	58.0	Swanse	70.2	63.9	57.7	63.9
Newc	63.2	64.9	54.8	56.7	Wrexm	72.2	57.7	54.3	59.1
Norwch	71.3	70.7	53.8	61.3	England	66.8	63.5	52.8	58.5
Nottm	70.1	61.6	51.6	57.3	N Ireland	68.5	66.2	51.5	58.0
Oxford	66.3	63.9	52.0	56.4	Scotland	65.9	63.7	52.2	57.1
Plymth	71.7	65.8	55.6	60.0	Wales	69.3	65.0	53.6	60.0
Ports	67.0	66.5	53.3	58.6	UK	66.9	63.7	52.8	58.4

Blank cells indicate no patients on that treatment modality attending that centre when data were collected

percentage of patients with uncertain aetiology for the remaining 70 centres was between 4.2% and 34.9%, and has shown marked improvement over time. Completeness of PRD data has also continued to improve and no centre had >30% missing data in 2013.

Glomerulonephritis (GN) remained the most common primary renal diagnosis in the 2013 prevalent cohort at 19% (table 2.11). Diabetes accounted for 15.9% of renal disease in prevalent patients on RRT, although it was

more common in the ≥ 65 year age group compared to the younger group (17.9% vs. 14.8%). This contrasted with incident patients where diabetes was the predominant diagnostic code in 25.4% of new RRT patients. Younger patients (age <65 years) were more likely to have GN (21.6%) or diabetes (14.8%) and less likely to have renal vascular disease (1.0%) or hypertension (5.2%) as the cause of their renal failure. Uncertain aetiology (19.5%) was the most common cause in the over 65s.

Table 2.9. Percentage of prevalent RRT patients in each age group by centre on 31/12/2013

Centre	N	Percentage of patients			
		18–39 years	40–64 years	65–74 years	75+ years
England					
B Heart	658	12.2	42.7	21.6	23.6
B QEH	2,051	14.2	53.6	17.7	14.4
Basldn	270	13.0	40.4	21.9	24.8
Bradfd	520	20.8	51.3	16.0	11.9
Brightn	875	11.3	46.3	22.7	19.7
Bristol	1,427	15.1	47.2	20.7	17.0
Camb	1,198	13.8	49.2	19.9	17.0
Carlis	227	12.3	51.1	20.7	15.9
Carsh	1,488	9.7	46.2	23.2	20.8
Chelms	239	7.9	42.7	23.8	25.5
Colchr	115	10.4	22.6	29.6	37.4
Covnt	932	13.1	48.9	20.4	17.6
Derby	472	10.8	46.0	25.4	17.8
Donc	259	10.0	44.4	22.4	23.2
Dorset	628	9.9	40.1	27.9	22.1
Dudley	312	7.4	47.1	19.2	26.3
Exeter	890	10.1	43.4	24.0	22.5
Glouc	412	9.2	42.2	25.0	23.5
Hull	815	13.9	49.8	20.6	15.7
Ipswi	354	9.3	52.8	23.2	14.7
Kent	965	12.0	46.5	24.4	17.1
L Barts	2,103	16.5	56.1	16.9	10.5
L Guys	1,841	20.0	53.4	16.2	10.3
L Kings	965	11.4	52.1	19.4	17.1
L Rfree	1,955	17.5	48.6	18.9	15.0
L St.G	754	13.4	51.5	19.4	15.8
L West	3,142	12.3	52.9	20.7	14.2
Leeds	1,466	16.2	51.0	21.1	11.8
Leic	2,072	13.2	48.7	22.4	15.6
Liv Ain	190	6.8	38.9	20.5	33.7
Liv Roy	1,269	17.6	56.1	18.4	7.9
M RI	1,864	17.9	55.3	17.9	8.9
Middlbr	836	14.2	49.8	19.6	16.4
Newc	964	13.9	54.3	21.0	10.9
Norwch	692	12.0	44.5	21.4	22.1
Nottm	1,075	17.1	48.6	18.7	15.6
Oxford	1,565	14.8	54.5	17.1	13.6
Plymth	503	12.1	48.7	22.9	16.3
Ports	1,555	13.6	49.5	21.6	15.4
Prestn	1,090	11.7	51.5	22.0	14.8
Redng	731	9.8	48.3	23.7	18.2
Salford	886	14.2	52.3	20.2	13.3
Sheff	1,329	13.8	50.8	19.2	16.2
Shrew	342	12.3	44.2	23.4	20.2
Stevng	765	10.3	48.1	20.1	21.4
Sthend	221	12.7	38.5	22.2	26.7
Stoke	726	13.8	46.0	21.5	18.7
Sund	423	13.0	51.5	23.9	11.6
Truro	377	12.5	39.8	23.3	24.4
Wirral	252	9.1	39.3	22.2	29.4
Wolve	563	11.9	49.7	20.2	18.1
York	409	17.6	47.4	20.0	14.9

Table 2.9. Continued

Centre	N	Percentage of patients			
		18–39 years	40–64 years	65–74 years	75+ years
N Ireland					
Antrim	224	9.4	41.1	26.8	22.8
Belfast	729	17.8	53.6	17.0	11.5
Newry	199	15.1	48.2	23.1	13.6
Ulster	156	8.3	37.2	21.8	32.7
West NI	238	15.5	45.0	22.7	16.8
Scotland					
Abrdn	519	19.1	48.7	18.7	13.5
Airdrie	393	14.2	50.6	20.1	15.0
D & Gall	117	10.3	48.7	21.4	19.7
Dundee	403	11.4	46.9	24.3	17.4
Edinb	739	16.0	57.6	17.3	9.1
Glasgw	1,598	13.6	55.0	18.6	12.8
Inverns	216	13.0	58.8	13.9	14.4
Klmarnk	296	9.1	53.7	22.3	14.9
Krkldy	283	12.0	44.5	24.0	19.4
Wales					
Bangor	99	8.1	30.3	32.3	29.3
Cardff	1,584	14.8	51.3	20.1	13.8
Clwyd	153	11.1	41.2	30.7	17.0
Swanse	691	11.0	42.3	25.3	21.4
Wrexm	250	13.6	45.2	16.8	24.4
England	48,032	13.9	49.9	20.4	15.8
N Ireland	1,546	14.9	48.1	20.6	16.4
Scotland	4,564	14.0	52.9	19.5	13.7
Wales	2,777	13.3	47.2	22.1	17.4
UK	56,919	13.9	49.9	20.4	15.8
(Min : max)		(6.8 : 20.8)	(22.6 : 58.8)	(13.9 : 32.3)	(7.9 : 37.4)

As described before, the male : female ratio was greater than unity for all primary renal diagnoses (table 2.11).

In individuals aged less than 65 years, the renal transplantation to dialysis ratio was greater than 1 in all PRD

groups except diabetes and renovascular disease. In those aged >65 years, dialysis was more prevalent than renal transplantation in all PRD groups except polycystic kidney disease (PKD) (table 2.12).



Fig. 2.4. Age profile of prevalent RRT patients by modality on 31/12/2013

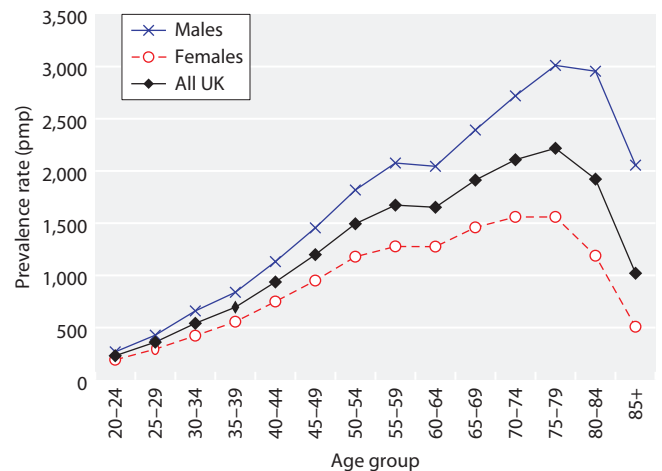


Fig. 2.5. Prevalence rate of RRT patients per million population by age and gender on 31/12/2013

Table 2.10. Ethnicity of prevalent RRT patients by centre on 31/12/2013

Centre	Percentage data not available	N with data	Percentage in each ethnic group*				
			White	Black	S Asian	Chinese	Other
England							
B Heart	0.0	658	59.4	8.1	30.9	0.8	0.9
B QEH	0.0	2,051	63.0	9.6	24.3	0.8	2.3
Basldn	0.0	270	87.4	6.3	4.4	0.4	1.5
Bradfd	0.0	520	56.7	1.9	40.2	0.6	0.6
Brightn	1.8	859	92.2	2.2	3.8	0.1	1.6
Bristol	0.3	1,423	89.6	4.6	3.9	0.4	1.5
Camb	1.4	1,181	92.7	1.9	4.5	0.2	0.8
Carlis	0.4	226	98.7	0.0	0.9	0.0	0.4
Carsh	12.2	1,307	73.1	9.3	12.9	1.6	3.1
Chelms	5.0	227	92.1	3.1	2.2	0.9	1.8
Colchr	0.0	115	96.5	0.0	0.9	0.9	1.7
Covnt	0.0	932	80.8	3.9	14.5	0.8	0.1
Derby	1.7	464	81.7	4.1	12.7	0.6	0.9
Donc	0.0	259	95.0	1.2	2.3	0.4	1.2
Dorset	0.0	628	97.3	0.3	0.8	0.5	1.1
Dudley	0.6	310	86.8	2.9	8.4	0.6	1.3
Exeter	0.1	889	98.5	0.6	0.3	0.1	0.4
Glouc	0.0	412	95.1	1.7	2.4	0.0	0.7
Hull	2.8	792	96.8	0.4	1.6	0.3	0.9
Ipswi	1.7	348	93.4	3.4	2.9	0.3	0.0
Kent	0.8	957	95.1	0.9	2.5	0.2	1.3
L Barts	0.0	2,102	39.0	33.5	25.6	1.5	0.4
L Guys	0.9	1,824	65.0	23.1	7.1	1.2	3.6
L Kings	0.1	964	49.6	34.4	10.5	1.9	3.6
L Rfree	3.6	1,884	47.7	22.8	19.3	1.5	8.7
L St.G	4.1	723	49.1	22.4	20.2	2.2	6.1
L West	0.0	3,142	43.6	18.4	34.2	1.1	2.8
Leeds	0.0	1,466	80.8	4.8	13.0	0.6	0.8
Leic	2.6	2,019	76.5	3.4	18.5	0.4	1.1
Liv Ain	2.6	185	94.6	1.6	2.2	0.5	1.1
Liv Roy	1.5	1,250	93.2	2.0	1.7	1.2	1.9
M RI	1.1	1,844	78.9	6.0	12.4	0.8	1.9
Middlbr	0.1	835	94.6	0.4	4.6	0.4	0.1
Newc	0.1	963	93.1	0.9	4.5	0.7	0.7
Norwch	0.0	692	97.4	0.4	0.3	1.6	0.3
Nottm	0.0	1,075	87.1	4.5	6.6	0.0	1.9
Oxford	2.2	1,530	83.0	4.1	9.5	0.7	2.7
Plymth	0.0	503	97.4	0.4	0.6	0.6	1.0
Ports	1.4	1,534	94.2	0.9	3.3	0.0	1.6
Prestn	0.0	1,090	85.8	0.8	13.0	0.0	0.4
Redng	5.1	694	71.9	6.9	19.3	0.4	1.4
Salford	0.0	886	81.9	1.8	14.8	0.5	1.0
Sheff	0.6	1,321	91.3	2.3	4.0	0.7	1.7
Shrew	0.0	342	94.7	1.5	3.2	0.0	0.6
Stevng	1.2	756	70.8	9.1	17.2	0.5	2.4
Sthend	3.2	214	84.6	2.3	4.2	2.3	6.5
Stoke	1.0	719	94.2	0.4	3.6	0.3	1.5
Sund	0.0	423	96.9	0.7	2.1	0.2	0.0
Truro	0.0	377	99.5	0.0	0.3	0.0	0.3
Wirral	0.8	250	95.2	0.8	2.0	1.6	0.4
Wolve	0.2	562	70.1	9.4	19.8	0.5	0.2
York	0.0	409	97.3	0.5	1.5	0.2	0.5

Table 2.10. Continued

Centre	Percentage data not available	N with data	Percentage in each ethnic group*				
			White	Black	S Asian	Chinese	Other
N Ireland							
Antrim	0.0	224	99.1	0.4	0.4	0.0	0.0
Belfast	0.0	729	98.4	0.3	1.0	0.3	0.1
Newry	0.0	199	99.5	0.0	0.0	0.5	0.0
Ulster	0.0	156	96.8	0.0	1.9	1.3	0.0
West NI	0.0	238	98.3	0.4	0.8	0.4	0.0
Scotland							
Abrdn	62.2	196					
Airdrie	65.6	135					
D & Gall	83.8	19					
Dundee	56.8	174					
Edinb	90.8	68					
Glasgw	90.5	152					
Inverns	20.8	171	98.8	0.0	1.2	0.0	0.0
Klmarnk	56.4	129					
Krkldy	81.3	53					
Wales							
Bangor	0.0	99	98.0	0.0	1.0	0.0	1.0
Cardff	0.0	1,584	93.2	1.2	4.5	0.5	0.6
Clwyd	2.0	150	99.3	0.0	0.7	0.0	0.0
Swanse	0.0	691	97.8	0.3	1.6	0.0	0.3
Wrexm	0.0	250	98.8	0.4	0.4	0.4	0.0
England	1.3	47,406	76.9	8.2	12.3	0.7	1.9
N Ireland	0.0	1,546	98.4	0.3	0.8	0.4	0.1
Scotland	76.0	1,097	96.0	0.4	2.8	0.5	0.4
Wales	0.1	2,774	95.3	0.8	3.1	0.3	0.4
UK	7.2	52,823	78.9	7.5	11.3	0.7	1.7

*Percentage breakdown is not shown for centres with less than 50% data completeness, but these centres are included in national averages
See appendix H for ethnicity coding

Diabetes

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

between type 1 and type 2 diabetes as this distinction was not made in the data submitted by most centres.

The male:female ratio for diabetes as PRD was 1.6. The number of prevalent patients with diabetes as a primary renal diagnosis increased 7.0% to 9,052 in

Table 2.11. Primary renal diagnosis in prevalent RRT patients by age and gender on 31/12/2013

Primary diagnosis*	N	% all patients	Inter-centre range %	Age <65		Age ≥65		M:F ratio
				N	%	N	%	
Aetiology uncertain	9,062	16.0	4.3–33.9	5,059	13.9	4,003	19.5	1.6
Glomerulonephritis	10,812	19.0	8.1–26.8	7,829	21.6	2,983	14.5	2.1
Pyelonephritis	6,220	11.0	5.3–19.3	4,629	12.8	1,591	7.8	1.1
Diabetes	9,052	15.9	10.0–27.3	5,369	14.8	3,683	17.9	1.6
Polycystic kidney	5,634	9.9	4.7–18.1	3,705	10.2	1,929	9.4	1.1
Hypertension	3,439	6.1	1.5–15.9	1,880	5.2	1,559	7.6	2.4
Renal vascular disease	1,722	3.0	0.7–9.3	350	1.0	1,372	6.7	2.0
Other	9,213	16.2	6.1–28.9	6,442	17.8	2,771	13.5	1.3
Not sent	1,650	2.9	0.1–28.6	1,013	2.8	637	3.1	1.6

*See appendix H: ERA-EDTA coding

Excluded centre: ≥40% primary renal diagnosis aetiology uncertain (Colchr)

Table 2.12. Transplant : dialysis ratios by age and primary renal disease in the prevalent RRT population on 31/12/2013

Primary diagnosis*	Transplant : dialysis ratio	
	<65	≥65
Aetiology uncertain	2.1	0.3
Glomerulonephritis	2.4	0.8
Pyelonephritis	2.7	0.5
Diabetes	0.9	0.1
Polycystic kidney	2.7	1.6
Hypertension	1.2	0.3
Renal vascular disease	1.0	0.1
Other	2.1	0.4
Not sent	1.3	0.2

*See appendix H ERA-EDTA coding

Excluded centre: ≥40% primary renal diagnosis aetiology uncertain (Colchr)

2013, from 8,456 in 2012, representing 15.9% of all prevalent patients (compared with 13.5% in 2006) (table 2.13). The median age at start of RRT for patients with diabetes (56 years) was nine years higher compared with patients without diabetes (47 years), although the median age at the end of 2013 for prevalent diabetic patients was only three years higher than for individuals without diabetes. This reflects reduced survival for patients with diabetes compared with patients without diabetes on RRT.

Table 2.13. Age relationships in patients with diabetes and patients without diabetes and modality in prevalent RRT patients on 31/12/2013

	Patients with diabetes ^a	Patients without diabetes ^b
N	9,052	46,102
M:F ratio	1.61	1.54
Median age on 31/12/13	61	58
Median age at start of RRT ^{c,d}	56	47
Median years on RRT ^d	3.7	7.0
% HD	59	38
% PD	8	6
% transplant	33	56

Excluded centre: ≥40% primary renal diagnosis aetiology uncertain (Colchr)

^aPatients with diabetes: patients with a primary renal disease code of diabetes

^bPatients without diabetes: all patients excluding patients with diabetes as a PRD and patients with a missing primary renal disease code

^cMedian age at start of RRT was calculated from the most recent RRT start date

^dPatients with an initial treatment modality of transferred in or transferred out were excluded from the calculation of median age at start of RRT and median years on RRT, since their treatment start date was not accurately known

Median time on RRT for patients with diabetes was less when compared with patients without diabetes (3.7 years vs. 7.0 years) and this difference in survival between patients with diabetes and patients without diabetes has not changed over the last five years (2.9 years vs. 6.2 years in 2008). Patients with diabetes starting RRT in Scotland were four years younger compared with the UK average age of patients with diabetes starting RRT (data not shown).

Fifty nine percent of patients with diabetes as primary renal diagnosis were undergoing HD compared to just 38% of patients with any other primary renal diagnosis (table 2.13). The percentage of patients with a functioning transplant was much lower in prevalent patients with diabetes than in prevalent patients without diabetes (33% vs. 56%). However, the proportion of patients with diabetes as PRD with a functioning transplant has increased since 2004 when only 26% of patients with diabetes had a functioning transplant. For older patients with diabetes (age ≥65 years), 12.1% had a functioning transplant compared with 33.3% of their peers without diabetes (table 2.14). In Northern Ireland, 28% of prevalent patients with diabetes had a functioning transplant compared with the UK average of 33%. A higher proportion of prevalent patients without diabetes (18.3%) were on home dialysis therapies (home HD and PD) compared with prevalent patients with diabetes (14.4%).

Modalities of treatment

Transplantation was the most common treatment modality (52%) for prevalent RRT patients in 2013, followed closely by centre-based HD (39.6%) in either hospital centre (18.5%) or satellite unit (21.1%) (figure 2.6). Satellite HD was again more prevalent than

Table 2.14. Treatment modalities by age and diabetes status on 31/12/2013

	<65 years		≥65 years	
	Diabetes ^a	All other causes ^b	Diabetes ^a	All other causes ^b
N	5,369	29,894	3,683	16,208
% HD	44.9	26.5	79.0	58.7
% PD	7.9	4.8	9.0	8.0
% transplant	47.3	68.7	12.1	33.3

Excluded centre with ≥40% PRD aetiology uncertain (Colchr)

^aPatients with diabetes are patients with a primary renal disease code of diabetes

^bPatients without diabetes are calculated as all patients excluding patients with diabetes as a PRD and patients with a missing primary renal disease code

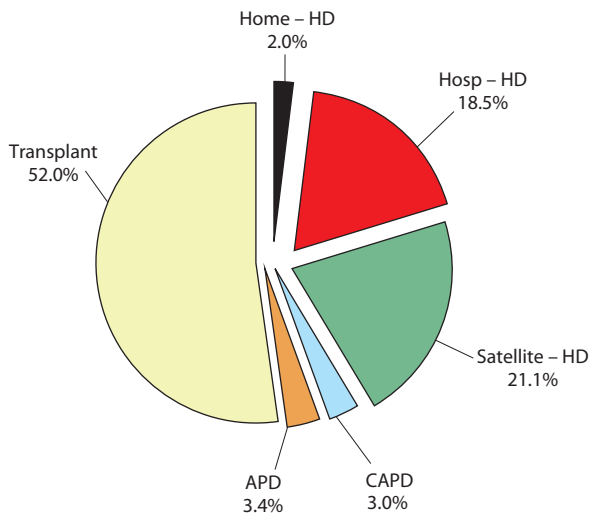


Fig. 2.6. Treatment modality in prevalent RRT patients on 31/12/2013

in centre which was similar to 2012 when this was first noted. Home therapies made up the remaining 8.4% of treatment therapies, largely PD in its different formats (6.4%) which was similar to 2012. The proportion on continuous ambulatory peritoneal dialysis (CAPD) and automated PD (APD) was 3.0% and 3.4% respectively, although the proportion on APD may be an underestimate due to centre level coding issues which mean the UKRR cannot always distinguish between these therapies.

As mentioned earlier, treatment modality was related to patient age. Younger patients (age <65 years), were more likely to have a functioning transplant (65.1%) when compared with patients aged over 65 years (28.8%) (table 2.15). HD was the principal modality in the older patients (62.9%). However, in the elderly, interpreting the proportion of patients on renal replacement therapy who are transplanted is not straight forward as this depends on approaches to dialysis and conservative care in this age group.

Figure 2.7 shows the association between age and RRT modality. Beyond 54 years of age, transplant prevalence declined, whilst HD prevalence increased. The proportion of each age group treated by PD remained more stable across the age spectrum.

The proportion of prevalent dialysis patients receiving HD, ranged from 70.8% in Carlisle to 100% in Colchester (table 2.16).

Overall, the proportion of dialysis patients treated in a satellite haemodialysis unit has increased to 44.0% this year compared to 39.9% in 2010. Although there are satellite units in Scotland, the data provided for 2013 did not distinguish between main centre and satellite unit haemodialysis. In 2013, the number of centres that had more than 50% of their haemodialysis activity taking place in satellite units was 30 (figure 2.8). There was also wide variation between centres in the proportion of dialysis patients on APD treatment, ranging from 0% to 21.7% (table 2.16). Ten of the 70 centres with a PD programme did not report having any patients on APD, whilst in the Northern Ireland centres the majority of PD patients were on this form of the modality.

Home haemodialysis

The use of home HD as a RRT peaked in 1982 when almost 2,200 patients were estimated to be on this modality, representing 61% of HD patients reported to the ERA-EDTA Registry at that time. The fall in the use of this modality to just 445 patients (2.4% of HD patients) in 2006 was probably due to an increase in availability and uptake of renal transplantation, and also the expansion of hospital HD provision with the introduction of satellite units. In the last seven years there has been renewed interest in home HD and a target of 15% of HD patients on this modality has been suggested [4]. Equipment changes and patient choice has helped drive this change. Since 2006 there has been a gradual increase in the proportion of prevalent patients receiving haemodialysis in their own homes so that in 2013 it reached

Table 2.15. Percentage of prevalent RRT patients by dialysis and transplant modality by UK country on 31/12/2013

UK country	<65 years				≥65 years			
	N	% HD	% PD	% transplant	N	% HD	% PD	% transplant
England	30,607	29.8	5.6	64.6	17,425	62.9	8.4	28.8
N Ireland	975	26.8	3.9	69.3	571	68.1	7.5	24.3
Scotland	3,053	29.1	3.8	67.1	1,511	64.3	7.3	28.3
Wales	1,679	25.6	5.4	69.0	1,098	59.0	8.3	32.7
UK	36,314	29.5	5.4	65.1	20,605	62.9	8.3	28.8

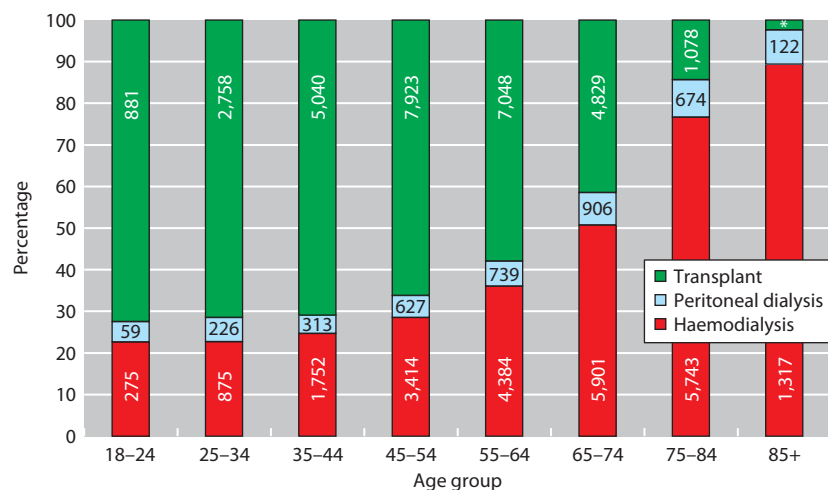


Fig. 2.7. Treatment modality distribution by age in prevalent RRT patients on 31/12/2013
N = 35

4.7% of HD patients ($n = 1,113$, figure 2.2). These numbers may be an underestimate as some centres have been unable to submit data for patients coded as home HD and work is ongoing to address this.

Some patients are sent by their parent renal centre to centres known to have a strong programme for home HD. In order to avoid the possibility of the parent renal centre being wrongly penalised, we measured the

Table 2.16. Percentage of prevalent dialysis patients by dialysis modality by postcode centre on 31/12/2013

Centre	N	% haemodialysis					% peritoneal dialysis	
		Total	Home	Geo-HHD	Hospital	Satellite	CAPD	APD
England								
B Heart	476	91.4	4.8	4.8	80.3	6.3	5.7	2.9
B QEH	1,070	87.2	5.1	4.6	10.2	72.0	4.8	8.0
Basldn	190	84.2	0.0	0.5	80.5	3.7	6.8	9.0
Bradfd	232	87.1	1.3	2.9	71.1	14.7	4.3	8.6
Brightn	477	83.4	9.6	9.7	42.4	31.5	10.1	6.5
Bristol	581	88.5	4.5	3.6	16.2	67.8	5.5	6.0
Camb	405	93.8	4.7	4.0	39.5	49.6	0.0	0.0
Carlis	96	70.8	0.0	0.0	46.9	24.0	13.5	15.6
Carsh	884	86.2	2.6	2.9	20.6	63.0	3.7	10.1
Chelms	144	85.4	1.4	2.0	84.0	0.0	11.8	2.8
Colchr	115	100.0	0.0	0.0	100.0	0.0	0.0	0.0
Covnt	461	81.8	4.1	3.5	77.7	0.0	18.2	0.0
Derby	302	71.9	9.6	9.6	62.3	0.0	18.2	9.9
Donc	198	82.3	0.5	4.4	45.0	36.9	0.5	17.2
Dorset	315	84.8	1.3	2.2	19.4	64.1	7.6	7.3
Dudley	231	75.8	5.6	6.1	56.3	13.9	15.2	9.1
Exeter	477	84.7	0.6	0.6	9.6	74.4	7.6	7.6
Glouc	244	86.5	0.4	2.0	74.2	11.9	4.1	9.4
Hull	407	80.4	2.2	2.2	37.4	40.8	10.1	9.6
Ipswi	152	80.3	1.3	0.7	67.1	11.8	12.5	7.2
Kent	459	86.1	4.4	5.0	22.0	59.7	12.4	1.5
L Barts	1,151	82.9	1.3	1.2	39.4	42.2	3.8	13.3
L Guys	659	95.6	6.8	2.9	14.0	74.8	1.8	2.6
L Kings	603	82.6	0.8	3.1	14.1	67.7	7.0	10.5
L Rfree	862	84.8	2.3	2.1	3.5	79.0	5.7	9.5
L St.G	323	85.1	1.6	2.5	37.2	46.4	4.0	10.2
L West	1,459	95.8	1.0	1.1	20.2	74.6	1.9	2.3
Leeds	576	88.0	3.3	2.5	16.5	68.2	3.1	8.9

Table 2.16. Continued

Centre	N	% haemodialysis					% peritoneal dialysis	
		Total	Home	Geo-HHD	Hospital	Satellite	CAPD	APD
Leic	1,057	85.6	6.6	6.9	16.3	62.7	4.0	10.4
Liv Ain	185	83.8	4.9	7.3	3.8	75.1	3.8	12.4
Liv Roy	417	86.1	8.6	7.2	38.4	39.1	8.4	5.5
M RI	605	86.3	10.3	9.5	26.3	49.8	3.8	9.9
Middlbr	365	96.2	3.6	3.8	25.5	67.1	3.8	0.0
Newc	316	86.7	7.3	6.8	79.4	0.0	1.0	11.7
Norwch	370	89.2	7.0	7.1	48.4	33.8	8.1	2.7
Nottm	454	81.7	6.4	6.7	38.6	36.8	6.6	11.7
Oxford	534	81.5	4.9	3.9	31.1	45.5	4.5	14.0
Plymth	171	78.4	3.5	4.1	71.9	2.9	8.2	13.5
Ports	685	87.6	3.9	3.5	18.1	65.6	12.4	0.0
Prestn	603	90.7	5.6	5.6	21.1	64.0	2.0	7.3
Redng	358	78.8	2.0	3.6	36.0	40.8	14.0	7.3
Salford	475	82.5	5.7	6.3	33.3	43.6	8.6	8.8
Sheff	659	89.4	6.5	5.3	37.5	45.4	10.6	0.0
Shrew	219	85.4	8.2	8.6	45.7	31.5	14.6	0.0
Stevng	511	91.2	5.5	6.2	30.3	55.4	8.8	0.0
Sthend	138	87.0	0.7	1.4	86.2	0.0	13.0	0.0
Stoke	398	78.1	0.0	0.5	52.5	25.6	3.3	14.6
Sund	208	94.7	0.5	1.0	60.1	34.1	1.9	2.9
Truro	175	86.3	4.0	4.0	42.9	39.4	6.3	7.4
Wirral	248	85.9	3.6	4.4	35.1	47.2	2.4	11.7
Wolve	383	78.6	3.7	5.4	24.8	50.1	15.1	6.0
York	167	83.8	7.2	7.7	31.7	44.9	13.8	2.4
N Ireland								
Antrim	142	89.4	2.1	2.1	87.3	0.0	2.1	8.5
Belfast	239	88.7	6.3	6.0	82.4	0.0	0.8	10.5
Newry	110	83.6	1.8	1.8	81.8	0.0	0.0	16.4
Ulster	112	94.6	4.5	4.4	90.2	0.0	0.9	3.6
West NI	128	88.3	4.7	4.7	83.6	0.0	0.0	10.2
Scotland								
Abrdn	248	89.9	2.8	2.0	87.1	0.0	7.3	2.8
Airdrie	206	93.2	0.5	1.9	92.7	0.0	4.4	2.4
D & Gall	60	75.0	3.3	3.5	71.7	0.0	11.7	13.3
Dundee	193	89.1	1.6	1.6	87.6	0.0	3.1	7.8
Edinb	306	90.2	1.6	1.7	88.6	0.0	1.6	8.2
Glasgw	643	93.2	4.2	3.8	89.0	0.0	2.3	4.5
Inverns	84	82.1	2.4	2.4	79.8	0.0	9.5	8.3
Klmarnk	180	76.1	3.9	3.9	72.2	0.0	2.2	21.7
Krkldy	166	88.6	0.0	0.0	88.6	0.0	0.6	10.8
Wales								
Bangor	99	86.9	14.1	13.9	54.6	18.2	10.1	3.0
Cardff	561	86.6	7.1	6.9	13.6	66.0	10.2	3.2
Clwyd	90	84.4	3.3	2.3	81.1	0.0	7.8	0.0
Swanse	387	85.0	5.2	5.6	58.9	20.9	9.8	5.2
Wrexm	123	82.1	1.6	1.7	64.2	16.3	17.9	0.0
England	23,250	86.3	4.1		32.7	49.6	6.5	7.0
N Ireland^a	731	88.9	4.2		84.7	0.0	0.8	9.9
Scotland^b	2,086	89.2	2.6		86.6	0.0	3.5	7.3
Wales	1,260	85.6	6.3		40.5	38.8	10.6	3.3
UK	27,327	86.6	4.1		38.5	44.0	6.3	6.9

^aThere are no satellite units in Northern Ireland^bAll haemodialysis patients in Scotland are shown as receiving treatment at home or in centre as no data was available regarding satellite dialysis

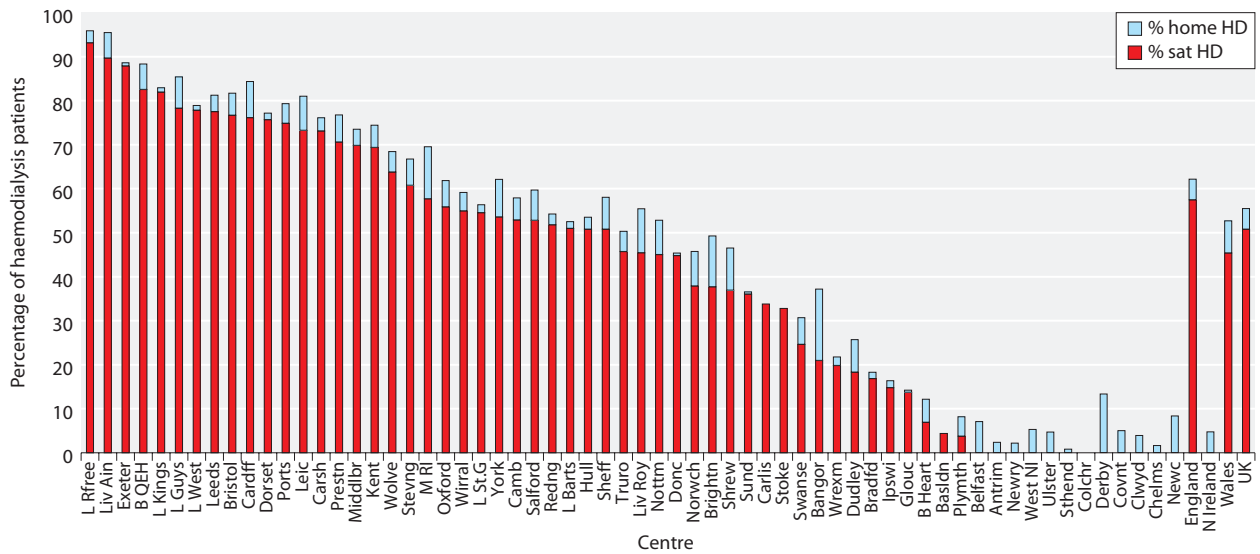


Fig. 2.8. Percentage of prevalent haemodialysis patients treated with satellite or home haemodialysis by centre on 31/12/2012. Scottish centres excluded as information on satellite HD was not available. No centres in Northern Ireland have satellite dialysis units

proportion of patients on home HD by centre, by assigning the patients to a given centre based on the patient postcode, rather than to the centre that is returning data to the UKRR (table 2.16 – Geo-HHD). This showed an increase in the prevalence of >1% of the Home HD for some centres (Bradford, Doncaster, Gloucester, London Kings, Liverpool Aintree, Reading, Wolverhampton, Airdrie).

In 2013, the percentage of dialysis patients receiving home HD varied from 0% in five centres, to greater than 5% in 21 centres (table 2.16). In the UK, the overall percentage of dialysis patients receiving home haemodialysis has increased from 3.4% in 2011 to 4.1% in 2013.

The proportion of dialysis patients receiving home haemodialysis was greatest in Wales at 6.3%, compared

with 4.2% in Northern Ireland, 4.1% in England and 2.6% in Scotland (figure 2.8, table 2.16). The proportion on home haemodialysis has increased in each of the four countries since 2011. Forty-seven renal centres across the UK had an increase in the proportion of individuals on home haemodialysis compared with 2011. By comparison, in 2007, the proportion of patients receiving home haemodialysis was 2% in each of the four UK countries.

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 2.9, which describes a year on year decline in the proportion of

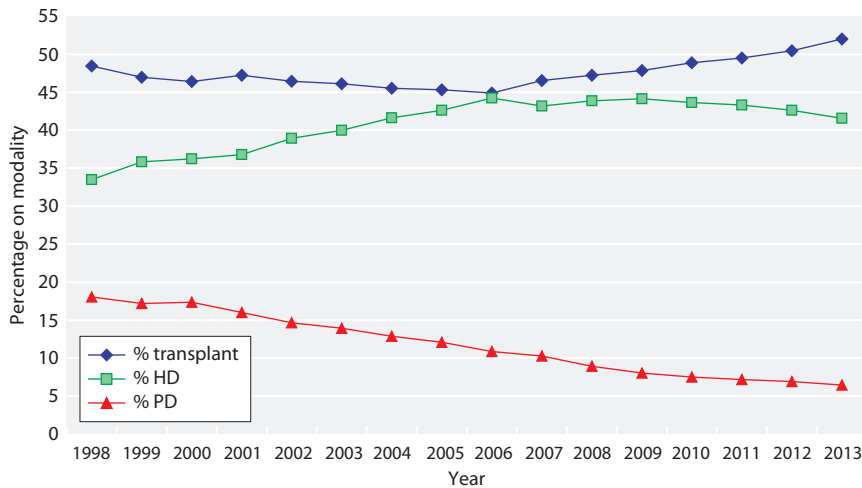


Fig. 2.9. Modality changes in prevalent RRT patients from 1998–2013

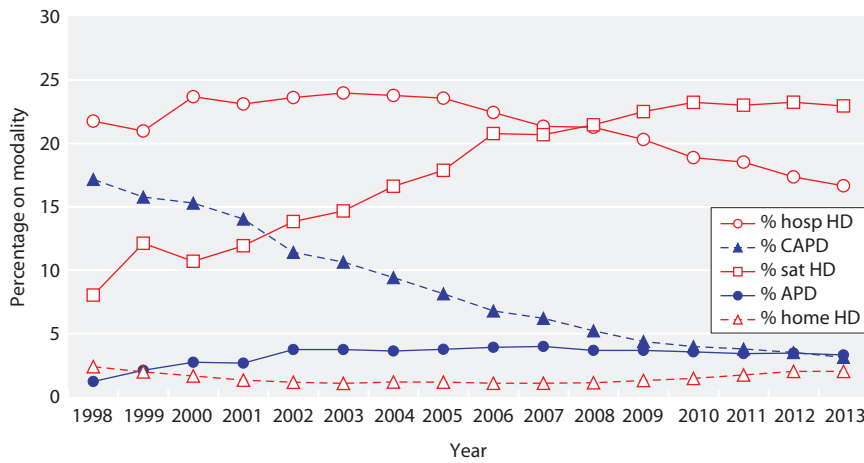


Fig. 2.10. Detailed dialysis modality changes in prevalent RRT patients from 1998–2013
Scottish centres excluded as information on satellite HD was not available

patients treated by PD since 2000 and a drop of 6.5% over the last 10 years. The absolute number of patients on PD decreased from 5,185 patients in 2004 to 3,666 patients in 2013. Time on PD has decreased marginally over the last six years, from a median of 2.0 years in 2007 to 1.7 years in 2013 probably reflecting increased transplantation rates in this largely younger patient group (table 2.7). The percentage of patients undergoing PD for more than seven years has significantly reduced over time (2.3% PD patients starting in 2000 to 0.7% patients starting in 2006) which might reflect increased awareness of complications associated with long PD use or increased access to transplantation for these patients.

The proportion of patients treated with HD has remained stable over the last three years. The downward trend seen in the proportion of patients with a functioning transplant has reversed since 2007 and was up by 1.6% from 2012, probably due to continued increases in living organ and non-heart beating donation [5].

Figure 2.10 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 CAPD. 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.

International comparisons

Prevalence rates in the UK are similar to those in most other Northern European countries but lower than Southern Europe and far lower than the USA. This probably reflects differences in incidence rates and conservative care practices between countries in addition to other healthcare system differences (figure 2.11).

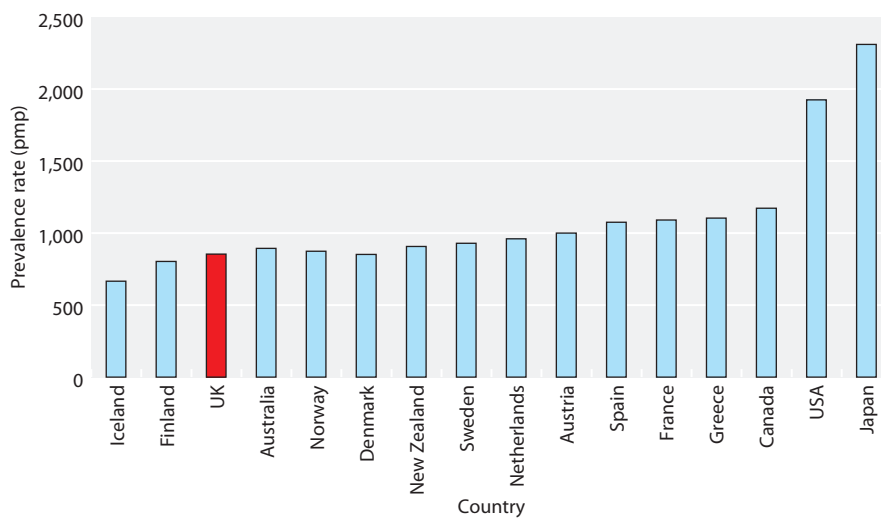


Fig. 2.11. RRT prevalence rates (pmp) by country in 2011
Non-UK data from USRDS
The UK data include paediatric patients to agree with the data from the other countries. All rates unadjusted. Japan is dialysis only. Data for France include 25 regions in 2011.

Conclusions

This year's report has once again seen an increase in the age of prevalent patients on RRT in the UK with over 75 year olds making up 15.8% of all RRT patients. There is increasing recognition of the specific needs for this population with several recent publications examining this [6–8]. In addition the American Society of Nephrology has recently developed a specific Geriatric Nephrology curriculum to address this issue [9].

There is again 4% growth in the population undergoing RRT, due at least in part, to improving survival of patients. Inclusion of these patients in well-designed studies such as the recently published CREDO-Kyoto study may further improve the quality of evidence available to inform the treatment of these patients and hopefully further improvements in survival in the future [10].

In general, areas with large ethnic minority populations had higher standardised prevalence ratios and this pattern has remained similar for many years. There was no real difference in prevalence rates between the four nations of the UK once adjustment was made for background population characteristics. There were increasing numbers of patients on HD and those with a functioning transplant. Patient numbers on PD continues to fall between 0.3%–0.5% every year. There have been substantial increases in home HD use in some areas although several centres are still unable to offer this modality.

Finally, it is hoped that the new codes for primary renal disease and comorbidity soon to be introduced will lead to increased understanding of patient outcomes and will strengthen the analyses in this chapter and beyond.

Conflicts of interest: none

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