

UK Renal Registry 19th Annual Report: Chapter 2 UK Renal Replacement Therapy Prevalence in 2015: National and Centre-specific Analyses

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Keywords

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 61,256 adult patients receiving renal replacement therapy (RRT) in the UK on 31st December 2015, an absolute increase of 3.9% from 2014.
- The actual number of patients increased by 3.6% for haemodialysis (HD), 4.7% for those with a functioning transplant but decreased by 0.8% for peritoneal dialysis (PD).
- The UK adult prevalence of RRT was 941 per million population (pmp). The reported prevalence in 2000 was 523 pmp.

- The number of patients receiving home HD decreased slightly from 1,195 patients in 2014 to 1,175 patients in 2015.
- The median age of prevalent patients was 59 years (HD 67 years, PD 64 years, transplant 54 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 75 years in 2015 was 16.1%.
- For all ages, RRT prevalence in men exceeded that in women, peaking in age group 75–79 years at 3,074 pmp in men and at 1,589 pmp in women.
- The most common identifiable renal diagnosis was glomerulonephritis (19%), followed by diabetes (16%), other (16%) and aetiology uncertain (16%).
- Transplantation continued as the most common treatment modality (53%), HD was used in 41% and PD in 6% of RRT patients.
- RRT prevalence in patients aged ≥ 85 years continued to increase between 2014 and 2015 (1,060 to 1,084 per million age related population).

Introduction

This chapter presents data on all adult patients on RRT in the UK at the end of 2015. The UK Renal Registry (UKRR) received data returns for 2015 from all five renal centres in Wales, all five in Northern Ireland and 51 in England. Cambridge (Addenbrooke's) renal centre were unable to submit their 2015 data at patient level by the close of the data collection period. The centre was able to submit summary numbers of patients on RRT at the end of 2015 by treatment modality. 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 capacity 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 ratios 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 (see appendix B2 for the 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 received. Queries and updated information are welcomed by the UKRR at any point during the year if this has occurred.

Prevalent patients on RRT in 2015 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 and denominator.

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. Cambridge is excluded from centre level prevalent analyses.

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 number of patients in each renal centre located in the country. These differ marginally from those quoted elsewhere in this report, however, when patients are allocated to geographical areas by their individual postcodes, as some centres treat patients across national boundaries.

Table 2.1. Prevalence of adult RRT in the UK on 31/12/2015

	England	N Ireland	Scotland	Wales	UK
Number of prevalent patients	51,672	1,701	4,853	3,030	61,256
Total estimated population, mid-2015 (millions)*	54.8	1.9	5.4	3.1	65.1
Prevalence ratios HD (pmp)	389	336	358	368	384
Prevalence ratios PD (pmp)	56	45	41	69	55
Prevalence ratios dialysis (pmp)	446	382	399	437	440
Prevalence ratios transplant (pmp)	497	537	504	540	501
Prevalence ratios total (pmp)	943	919	903	978	941
95% confidence intervals total (pmp)	935–951	875–962	878–929	943–1013	933–948

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

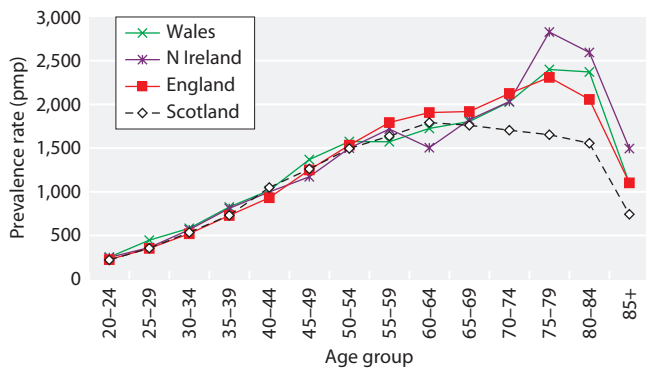


Fig. 2.1. RRT prevalence per million population by age group and UK country on 31/12/2015

There were 61,256 adult patients receiving RRT in the UK at the end of 2015, giving an adult UK population prevalence of 941 pmp (table 2.1) compared with 913 pmp in 2014. RRT prevalence increased in all UK countries in 2015. The prevalence of dialysis increased slightly in the UK from 430 pmp in 2014 to 440 pmp in 2015 and there continued to be a slow decline in PD prevalence (55 pmp in 2015 compared with 56 pmp in 2014 and 57 pmp in 2013). This decline in PD prevalence in the UK has been noted since 1997. Conversely, the prevalence of transplanted patients continued to increase in the UK from 482 pmp in 2014 to 501 pmp in 2015. In analyses stratified by country and age group, Northern Ireland exhibited a higher RRT prevalence for patients aged 75 years and older compared with the other UK countries (figure 2.1). In the UK, RRT prevalence in patients aged 80–84 continued to rise from 2,006 per million age related population (pmp) in 2014 to 2,044 pmp in 2015 and in patients aged ≥ 85 years from 1,060 pmp in 2014 to 1,084 pmp in 2015. This trend has been remarked upon over a number of years and the observed aging of the prevalent population is likely due in part to improving patient survival.

Prevalent patients by RRT modality and centre

There was a marked variation in the number of prevalent patients across renal centres and the distribution of their treatment modalities varied widely (table 2.2).

Changes in prevalence

The prevalent UK RRT population grew by 4.3% between 2014 and 2015 (table 2.3), an annual growth rate which has been fairly consistent over the last 10–15 years (figure 2.2).

The increase in prevalence was smallest in England (4.0%) and greatest in Wales (6.4%). In the case of the

latter, this increase was due in part to the way in which Bangor reported transplant patients – previously these were reported by Liverpool Royal with whom Bangor shares the care of its transplant patients. The changes reported here between 2013 and 2014 will differ from those presented in the 18th Annual Report as the current report includes data updates made subsequent to publication of the 18th Annual Report.

The number of prevalent HD patients increased by 2.7% in 2015 compared with 2014 (table 2.4) which was a greater increase than that seen between 2013 and 2014 (1.3% growth in prevalence pmp). There continued to be an increase in prevalent transplant patients (3.9% pmp) and a decrease in prevalent PD patients (1.6% pmp decrease).

The average annual change in prevalent patients between 2011 and 2015 was a 1.3% pmp increase in HD, 2.1% pmp fall in PD, and 4.8% pmp growth in prevalent transplant patients (table 2.4). In the same period there was an average annual 14.9% pmp growth in the use of home haemodialysis (data not shown).

The long-term (1998–2015) UK prevalence pattern by treatment modality is shown in figure 2.2. The steady growth in transplant numbers was maintained in 2015. The increase in home haemodialysis patient numbers over this period has been associated with more than a doubling in prevalence, from 2.0% of the dialysis population in 2005 ($N = 450$) to 4.2% in 2015 ($N = 1,175$). In contrast PD has fallen by 6.2% between 2005 and 2015.

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

There were substantial variations in the crude CCG/HB prevalence ratios pmp, from 631 pmp (NHS Guildford and Waverley, population 206,100) to 1,741 pmp (NHS Brent, population 324,000). There were similar variations in the standardised prevalence ratios (ratio of observed: expected prevalence given the age/gender breakdown of the CCG/HB) from 0.64 (NHS South

Table 2.2. Number of prevalent RRT patients by treatment modality and centre on 31/12/2015

Centre	N					Catchment population (millions)	2015 crude rate pmp	(95% CI)
	HD	PD	Dialysis	Transplant	RRT			
England								
B Heart	420	51	471	186	657	0.74	890	(822–958)
B QEH ^a	1,007	142	1,149	1,105	2,254	1.70	1,327	(1,272–1,381)
Basldn	163	35	198	77	275	0.42	663	(584–741)
Bradfd	233	18	251	330	581	0.65	891	(819–964)
Brightn	434	67	501	451	952	1.30	734	(687–781)
Bristol ^a	525	57	582	895	1,477	1.44	1,026	(974–1,079)
Camb ^{a,b}	583	44	627	912	1,539	1.16	1,329	(1,263–1,395)
Carlis	81	38	119	162	281	0.32	876	(774–978)
Carsh	817	113	930	652	1,582	1.91	827	(786–868)
Chelms	144	27	171	114	285	0.51	558	(494–623)
Colchr	120	0	120	0	120	0.30	401	(329–473)
Covnt ^a	354	86	440	518	958	0.89	1,074	(1,006–1,142)
Derby	244	80	324	213	537	0.70	764	(700–829)
Donc	181	23	204	97	301	0.41	734	(651–817)
Dorset	289	43	332	347	679	0.86	788	(729–847)
Dudley	172	57	229	83	312	0.44	706	(628–785)
Exeter	436	83	519	446	965	1.09	886	(830–942)
Glouc	228	37	265	178	443	0.59	754	(684–825)
Hull ^b	357	76	433	424	857	1.02	840	(784–896)
Ipswi	143	38	181	226	407	0.40	1,020	(921–1,119)
Kent	424	60	484	558	1,042	1.22	851	(799–903)
L Barts ^a	1,007	207	1,214	1,072	2,286	1.83	1,249	(1,198–1,300)
L Guys ^a	676	33	709	1,302	2,011	1.08	1,858	(1,777–1,939)
L Kings	566	90	656	429	1,085	1.17	926	(871–981)
L Rfree ^a	713	154	867	1,221	2,088	1.52	1,375	(1,316–1,434)
L St.G ^{a,b}	339	49	388	457	845	0.80	1,059	(988–1,131)
L West ^a	1,445	71	1,516	1,804	3,320	2.40	1,384	(1,337–1,431)
Leeds ^a	512	58	570	954	1,524	1.67	912	(867–958)
Leic ^a	917	108	1,025	1,161	2,186	2.44	897	(860–935)
Liv Ain	175	38	213	15	228	0.48	471	(410–532)
Liv Roy ^a	384	67	451	841	1,292	1.00	1,292	(1,222–1,363)
M RI ^a	526	65	591	1,305	1,896	1.53	1,238	(1,182–1,294)
Middlbr ^b	353	22	375	527	902	1.00	898	(840–957)
Newc ^a	315	46	361	649	1,010	1.12	901	(845–956)
Norwch	338	38	376	365	741	0.79	942	(874–1,010)
Nottm ^a	388	82	470	644	1,114	1.09	1,024	(964–1,084)
Oxford ^{a,b}	438	94	532	1,165	1,697	1.69	1,004	(956–1,052)
Plymth ^a	137	35	172	333	505	0.47	1,075	(981–1,169)
Ports ^a	667	72	739	932	1,671	2.02	826	(786–865)
Prestn ^b	573	53	626	591	1,217	1.49	815	(769–861)
Redng	302	66	368	410	778	0.91	855	(795–915)
Salford ^b	400	94	494	483	977	1.49	656	(615–697)
Sheff ^{a,b}	593	65	658	732	1,390	1.37	1,013	(960–1,067)
Shrew	203	32	235	135	370	0.50	739	(664–814)
Stevng	509	16	525	302	827	1.20	687	(640–734)
Sthend	126	17	143	103	246	0.32	777	(680–874)
Stoke	334	75	409	380	789	0.89	887	(825–949)
Sund	221	18	239	220	459	0.62	742	(674–810)
Truro ^b	160	22	182	234	416	0.41	1,007	(910–1,104)
Wirral	187	19	206	22	228	0.57	399	(347–450)
Wolve	318	79	397	184	581	0.67	869	(798–939)
York	160	29	189	300	489	0.49	993	(905–1,082)

Table 2.2. Continued

Centre	N					Catchment population (millions)	2015 crude rate pmp	(95% CI)
	HD	PD	Dialysis	Transplant	RRT			
Northern Ireland								
Antrim	122	20	142	97	239	0.29	811	(708–914)
Belfast ^a	183	24	207	566	773	0.64	1,214	(1,128–1,299)
Newry	88	22	110	116	226	0.26	865	(752–978)
Ulster	107	6	113	57	170	0.27	639	(543–735)
West NI	123	12	135	158	293	0.35	833	(737–928)
Scotland								
Abrdn	218	26	244	288	532	0.60	887	(811–962)
Airdrie	195	16	211	214	425	0.55	770	(697–843)
D & Gall	54	11	65	65	130	0.15	876	(725–1,026)
Dundee	187	17	204	217	421	0.46	909	(822–996)
Edinb ^a	284	27	311	462	773	0.96	802	(745–858)
Glasgw ^a	605	55	660	1,055	1,715	1.62	1,056	(1,006–1,106)
Inverns	93	13	106	147	253	0.27	937	(821–1,052)
Klmarnk	136	37	173	136	309	0.36	855	(760–950)
Krkldy	150	20	170	125	295	0.32	931	(825–1,038)
Wales								
Bangor	84	15	99	83	182	0.22	834	(713–955)
Cardff ^a	497	79	576	1,037	1,613	1.42	1,136	(1,080–1,191)
Clwyd	84	20	104	81	185	0.19	975	(835–1,116)
Swanse ^b	365	62	427	330	757	0.89	855	(794–916)
Wrexm	112	37	149	144	293	0.24	1,220	(1,080–1,359)
England	21,337	3,089	24,426	27,246	51,672			
N Ireland	623	84	707	994	1,701			
Scotland	1,922	222	2,144	2,709	4,853			
Wales	1,142	213	1,355	1,675	3,030			
UK	25,024	3,608	28,632	32,624	61,256			

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 2015 database a number of centres reported a variation to the numbers returned. Additionally, this year Cambridge was unable to submit their 2015 data at patient level prior to closing the database and, as such, provided summary numbers of patients still on RRT at the end of 2015 by treatment modality. This centre is therefore excluded from all centre level prevalent analyses. Tables 2.1, 2.3 and 2.4 (but not the remainder of this chapter) reflect these revisions: Hull (-1), Truro (-1), Prestn (-1), Middlbr (+9), Sheff (+65), L St.G (-1), Oxford (-1), Salford (+13), Camb (+1,539) and Swanse (+1)

West Lincolnshire) to 2.17 (Brent) (table 2.5). Confidence intervals are not presented for the crude ratios per million population for 2015 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.

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 2015, there were 77 CCGs/HBs with a significantly low standardised prevalence ratio (SPR), 110 with a

'normal' SPR and 48 with a significantly high SPR (table 2.5). As has been seen in previous 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 of renal replacement therapy. For example, the association with the level of ethnic diversity is illustrated by the fact that mean SPRs were significantly higher in the 89 CCGs/HBs with an ethnic minority population $\geq 10\%$ than in those with lower ethnic minority populations ($p < 0.001$). There was a strong, positive correlation between the SPR and percentage of the population that are non-White ($r = 0.9$ $p < 0.001$). In 2015, for each 10% increase in ethnic minority population,

Table 2.3. Number of prevalent patients on RRT by centre at year end 2011–2015

Centre	Date					% change 2014–2015	% annual change 2011–2015
	31/12/2011	31/12/2012	31/12/2013	31/12/2014	31/12/2015		
England							
B Heart	665	668	654	635	657	3.5	−0.3
B QEH	1,908	1,969	2,045	2,135	2,254	5.6	4.3
Basldn	231	258	270	278	275	−1.1	4.5
Bradfd	466	504	520	548	581	6.0	5.7
Brightn	777	829	871	915	952	4.0	5.2
Bristol	1,317	1,338	1,424	1,458	1,477	1.3	2.9
Camb	1,075	1,111	1,191	1,242	1,539	23.9	9.4
Carlis	215	216	227	250	281	12.4	6.9
Carsh	1,368	1,454	1,480	1,553	1,582	1.9	3.7
Chelms	216	225	240	261	285	9.2	7.2
Colchr	119	117	115	119	120	0.8	0.2
Covnt	875	899	929	960	958	−0.2	2.3
Derby	465	475	465	515	537	4.3	3.7
Donc	248	261	259	284	301	6.0	5.0
Dorset	587	609	627	664	679	2.3	3.7
Dudley	287	315	311	305	312	2.3	2.1
Exeter	809	842	888	945	965	2.1	4.5
Glouc	381	415	410	428	443	3.5	3.8
Hull	755	782	814	803	857	6.7	3.2
Ipswi	340	339	355	368	407	10.6	4.6
Kent	861	918	958	1,014	1,042	2.8	4.9
L Barts	1,871	1,948	2,090	2,210	2,286	3.4	5.1
L Guys	1,683	1,738	1,828	1,913	2,011	5.1	4.6
L Kings	873	917	964	1,023	1,085	6.1	5.6
L Rfree	1,727	1,842	1,921	2,006	2,088	4.1	4.9
L St.G	705	706	754	793	845	6.6	4.6
L West	3,008	3,084	3,123	3,231	3,320	2.8	2.5
Leeds	1,421	1,413	1,464	1,500	1,524	1.6	1.8
Leic	1,922	1,974	2,067	2,147	2,186	1.8	3.3
Liv Ain	190	194	190	217	228	5.1	4.7
Liv Roy	1,235	1,229	1,265	1,302	1,292	−0.8	1.1
M RI	1,650	1,711	1,854	1,797	1,896	5.5	3.5
Middlbr	753	788	830	854	902	5.6	4.6
Newc	919	946	962	977	1,010	3.4	2.4
Norwch	610	622	690	690	741	7.4	5.0
Nottm	1,022	1,012	1,073	1,062	1,114	4.9	2.2
Oxford	1,451	1,532	1,563	1,655	1,697	2.5	4.0
Plymth	464	458	502	503	505	0.4	2.1
Ports	1,390	1,440	1,545	1,592	1,671	5.0	4.7
Prestn	1,018	1,079	1,089	1,171	1,217	3.9	4.6
Redng	688	672	731	760	778	2.4	3.1
Salford	832	880	881	971	977	0.6	4.1
Sheff	1,256	1,299	1,329	1,360	1,390	2.2	2.6
Shrew	345	354	338	350	370	5.7	1.8
Stevng	639	664	755	778	827	6.3	6.7
Sthend	208	213	220	238	246	3.4	4.3
Stoke	695	699	724	775	789	1.8	3.2
Sund	389	422	421	450	459	2.0	4.2
Truro	355	375	371	379	416	9.8	4.0
Wirral	233	225	247	245	228	−6.9	−0.5
Wolve	512	524	568	574	581	1.2	3.2
York	340	396	409	461	489	6.1	9.5

Table 2.3. Continued

Centre	Date					% change 2014–2015	% annual change 2011–2015
	31/12/2011	31/12/2012	31/12/2013	31/12/2014	31/12/2015		
N Ireland							
Antrim	225	223	224	229	239	4.4	1.5
Belfast	683	702	726	747	773	3.5	3.1
Newry	189	188	199	208	226	8.7	4.6
Ulster	136	145	155	149	170	14.1	5.7
West NI	271	254	238	274	293	6.9	2.0
Scotland							
Abrdn	480	507	517	502	532	6.0	2.6
Airdrie	346	389	389	395	425	7.6	5.3
D & Gall	124	128	119	130	130	0.0	1.2
Dundee	397	395	398	401	421	5.0	1.5
Edinb	700	720	737	747	773	3.5	2.5
Glasgw	1,470	1,536	1,586	1,607	1,715	6.7	3.9
Inverns	227	220	216	225	253	12.4	2.7
Klmarnk	298	301	296	299	309	3.3	0.9
Krkldy	278	278	283	277	295	6.5	1.5
Wales							
Bangor	109	105	99	102	182	78.4	13.7
Cardff	1,531	1,544	1,582	1,591	1,613	1.4	1.3
Clwyd	137	173	152	166	185	11.4	7.8
Swanse	659	663	693	707	756	6.9	3.5
Wrexm	236	248	251	283	293	3.5	5.6
England	44,369	45,900	47,821	49,664	51,672	4.0	3.9
N Ireland	1,504	1,512	1,542	1,607	1,701	5.8	3.1
Scotland	4,320	4,474	4,541	4,583	4,853	5.9	3.0
Wales	2,672	2,733	2,777	2,849	3,030	6.4	3.2
UK	52,865	54,619	56,681	58,703	61,256	4.3	3.8

the standardised prevalence ratio increased by 0.17 (equates to ~17%). These trends are identical to those identified previously. The relationship between the ethnic composition of a CCG/HB and its SPR is demonstrated in figure 2.3.

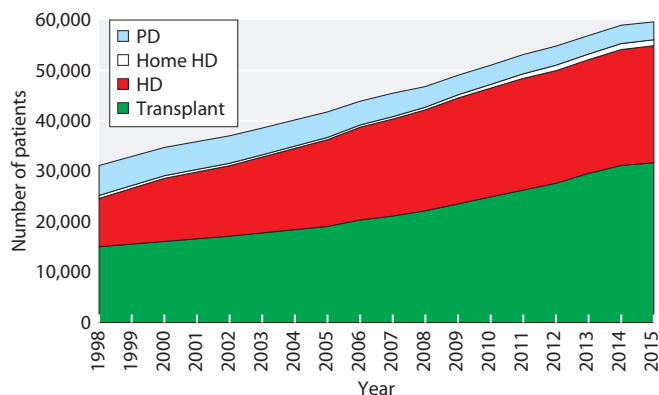


Fig. 2.2. Growth in prevalent patients by treatment modality at the end of each year 1998–2015

Only four of the 146 CCGs/HBs with ethnic minority populations of less than 10% had high SPRs: Abertawe Bro Morgannwg University and Cwm Taf in Wales, Greater Glasgow and Clyde in Scotland, and Belfast in Northern Ireland. Forty-four (49.4%) of the 89 CCGs/HBs with ethnic minority populations greater than 10% had high SPRs, whereas eight (9.0%) (NHS Chiltern, NHS Brighton and Hove, NHS Richmond, NHS Havering, NHS Solihull, NHS Calderdale, NHS Newcastle and Gateshead, NHS Trafford) had low SPRs. Some of the CCGs/HBs with a high (>15%) ethnic minority population had a normal expected RRT prevalence (e.g. NHS Crawley, NHS Kingston, NHS Milton Keynes, NHS Sheffield, NHS South Manchester).

The age and gender standardised prevalence ratios (which do not take into account variation in ethnicity) in each region of England and in Wales, Northern Ireland and Scotland are presented in table 2.6. Wales and Northern Ireland previously had higher than expected RRT prevalence but in more recent years were similar

Table 2.4. Change in RRT prevalence ratio pmp 2011–2015 by modality*

Year	Prevalence					% growth in prevalence pmp				
	HD pmp	PD pmp	Dialysis pmp	Transplant pmp	RRT pmp	HD	PD	Dialysis	Tx	RRT
2011	365	60	426	416	841					
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
2014	374	56	430	482	913	1.3	−1.5	0.9	4.5	2.8
2015	384	55	440	501	941	2.7	−1.6	2.2	3.9	3.1
Average annual growth 2011–2015						1.3	−2.1	0.8	4.8	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

to expected. Scotland had lower than expected RRT prevalence as did the North and South of England. RRT prevalence in London remained higher than expected.

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 2015. Median time on RRT for all prevalent patients remained fairly static at 6.2 years (6.1 years in 2014). Patients with functioning transplants had survived a median of 10.2 years on RRT whilst the median time on RRT of HD and PD patients was significantly less (3.3 and 1.6 years respectively).

The median time on HD was more than double that on PD and this could reflect early transplantation in the latter as well as higher technique failure rates for PD. Time on transplant is the same as observed in 2013 and 2014, but decreased slightly since 2008 (median 10.4 years) which may reflect a trend towards both the use of more marginal donor kidneys (including Donor after Cardiac Death (DCD) kidneys) and transplantation of older recipients in recent years.

Age

The median age of prevalent UK patients on RRT at 31st December 2015 (59.0 years, table 2.8) has remained stable over recent years although it is significantly higher than in 2005 when it was 55.0 years. As observed previously, there were marked differences between modalities; the median age of HD patients (67.2 years) was greater than that of those on PD (64.2 years) and substantially higher than that of transplanted patients (53.8 years). Of the UK prevalent RRT population, 50% were in the 40–64 years age group (table 2.9). The proportion

of patients aged 75 years and older varied greatly between countries and was highest in Wales (18.1%) and Northern Ireland (18.3%) and lowest in Scotland (12.5%) (table 2.9). Within countries there were large differences in the proportion of patients aged over 75 (within England these ranged between 9.1% in Liverpool Royal Infirmary and 46.7% in Colchester). In most centres the prevalent PD population was younger than the HD population (table 2.8).

Between-centre differences in the median age of prevalent patients by treatment modality can reflect differing demographics of the catchment populations as well as differing approaches to treatment modalities. For example, Colchester had the highest median age (73.1 years), whilst Belfast and London Guy's the lowest (55.0 years each) (table 2.8). This could reflect either variation in the catchment populations or follow-up of younger transplant patients (as noted above in the case of Belfast). The median age of the non-White dialysis population was lower than the overall dialysis population (62.0 vs 67.2 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 was 24 years later than for prevalent transplant patients.

In the UK on 31st December 2015, 65.8% of patients aged less than 65 years on RRT had a functioning transplant (table 2.15), compared with only 31.3% aged 65 years and over. There was a similar pattern in all four UK countries although the proportion of patients aged less than 65 with a functioning transplant in Northern Ireland (75.3%) was much higher than elsewhere.

Gender

The age distributions of males and females were very similar (data not shown). Standardising the age of the

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 Boards (Scotland) and Local Health Boards (Wales). Note that 3 CCGs merged in April 2015: Gateshead CCG, Newcastle North & East CCG and Newcastle West CCG became a single statutory body on 1 April 2015 and are reported here

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 2015 are italicised in greyed areas, those with significantly high prevalence ratios in 2015 are bold in greyed areas

Population numbers are the 2015 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

*CCGs where at least 10% of the RRT population were seen in Cambridge. In these CCGs the rate is underestimated. In the CCGs with >70% RRT population covered by Cambridge, the rate for 2015 has been blanked

UK area	Name	Total population	2010 O/E	2011 O/E	2012 O/E	2013 O/E	2014 O/E	2015 O/E	2015		Crude rate pmp	% non-White
									95% LCL	95% UCL		
Cheshire, Warrington and Wirral	<i>NHS Eastern Cheshire</i>	196,500	0.76	0.76	0.81	0.79	0.78	0.77	0.66	0.90	824	3.7
	<i>NHS South Cheshire</i>	178,900	0.92	0.89	0.86	0.88	0.92	0.93	0.80	1.09	939	2.9
	<i>NHS Vale Royal</i>	102,900	0.75	0.77	0.72	0.78	0.73	0.73	0.58	0.92	729	2.1
	<i>NHS Warrington</i>	207,700	0.83	0.80	0.82	0.84	0.90	0.87	0.75	1.01	838	4.1
	<i>NHS West Cheshire</i>	231,000	0.98	0.99	0.96	0.96	0.95	0.83	0.72	0.96	840	2.8
	<i>NHS Wirral</i>	320,900	0.84	0.83	0.81	0.83	0.75	0.74	0.65	0.84	735	3.0
Durham, Darlington and Tees	<i>NHS Darlington</i>	105,400	0.83	0.77	0.83	0.83	0.82	0.85	0.69	1.05	835	3.8
	<i>NHS Durham Dales, Easington and Sedgfield</i>	274,000	0.94	0.98	0.94	0.98	0.97	0.98	0.87	1.11	1,000	1.2
	<i>NHS Hartlepool and Stockton-on-Tees</i>	287,300	0.86	0.89	0.93	0.90	0.93	0.88	0.78	1.00	832	4.4
	<i>NHS North Durham</i>	245,700	0.77	0.76	0.83	0.79	0.78	0.77	0.67	0.89	753	2.5
	<i>NHS South Tees</i>	274,800	1.06	1.09	1.08	1.09	1.05	1.10	0.98	1.24	1,041	6.7
Greater Manchester	<i>NHS Bolton</i>	281,600	1.06	1.10	1.10	1.07	1.02	1.05	0.93	1.18	952	18.1
	<i>NHS Bury</i>	187,900	0.91	0.92	0.91	0.90	0.93	0.95	0.82	1.10	889	10.8
	<i>NHS Central Manchester</i>	188,900	1.51	1.44	1.48	1.57	1.63	1.65	1.44	1.90	1,043	48.0
	<i>NHS Heywood, Middleton & Rochdale</i>	214,200	0.95	0.99	1.00	1.03	1.03	1.03	0.89	1.18	920	18.3
	NHS North Manchester	178,700	1.05	1.05	1.11	1.08	1.10	1.15	0.97	1.35	817	30.8
	<i>NHS Oldham</i>	230,800	0.93	0.94	0.93	0.96	0.96	1.00	0.87	1.15	871	22.5
	<i>NHS Salford</i>	245,600	0.85	0.84	0.87	0.89	0.87	0.83	0.71	0.96	704	9.9
	<i>NHS South Manchester</i>	162,700	0.92	0.91	0.94	0.96	0.98	1.02	0.85	1.21	774	19.6
	<i>NHS Stockport</i>	288,700	0.86	0.89	0.88	0.81	0.82	0.83	0.73	0.94	814	7.9
	<i>NHS Tameside and Glossop</i>	254,900	0.94	0.93	0.93	0.92	0.90	0.90	0.78	1.02	847	8.2
	<i>NHS Trafford</i>	233,300	0.88	0.85	0.85	0.87	0.88	0.84	0.73	0.97	780	14.5
	<i>NHS Wigan Borough</i>	322,000	0.82	0.89	0.93	0.95	0.96	0.90	0.80	1.01	873	2.7
Lancashire	NHS Blackburn with Darwen	146,800	1.23	1.28	1.26	1.25	1.23	1.25	1.07	1.47	1,062	30.8
	<i>NHS Blackpool</i>	139,600	0.81	0.80	0.91	0.99	1.08	1.07	0.91	1.25	1,060	3.3
	<i>NHS Chorley and South Ribble</i>	172,500	0.77	0.83	0.89	0.95	0.93	0.91	0.78	1.07	893	2.9
	<i>NHS East Lancashire</i>	374,200	1.01	1.02	0.97	0.98	0.99	0.96	0.86	1.06	914	11.9
	<i>NHS Fylde & Wyre</i>	167,900	0.84	0.84	0.85	0.85	0.84	0.86	0.74	1.01	959	2.1
	<i>NHS Greater Preston</i>	202,800	0.87	0.83	0.89	0.87	0.88	0.89	0.76	1.03	809	14.7
	<i>NHS Lancashire North</i>	161,500	0.72	0.75	0.75	0.69	0.70	0.73	0.60	0.87	700	4.0
	<i>NHS West Lancashire</i>	112,700	0.89	0.85	0.81	0.77	0.74	0.79	0.64	0.97	789	1.9
Merseyside	<i>NHS Halton</i>	126,500	0.96	1.06	1.02	1.00	1.00	1.02	0.85	1.21	956	2.2
	<i>NHS Knowsley</i>	147,200	0.99	0.97	1.01	0.96	0.99	0.99	0.84	1.18	924	2.8
	<i>NHS Liverpool</i>	478,600	1.06	1.06	1.04	1.02	1.03	1.02	0.92	1.12	871	11.1
	<i>NHS South Sefton</i>	158,600	0.88	0.95	0.95	0.94	0.98	0.97	0.83	1.14	971	2.2
	<i>NHS Southport and Formby</i>	115,100	0.78	0.82	0.75	0.79	0.80	0.79	0.64	0.96	852	3.1
	<i>NHS St Helens</i>	177,600	0.92	0.90	0.91	0.87	0.86	0.85	0.72	1.00	845	2.0

Table 2.5. Continued

UK area	Name	Total population	2010 O/E	2011 O/E	2012 O/E	2013 O/E	2014 O/E	2015 O/E	2015			% non-White
									95% LCL	95% UCL	Crude rate pmp	
Cumbria, Northumberland, Tyne and Wear	NHS Cumbria	504,100	0.74	0.73	0.73	0.75	0.75	0.79	0.72	0.87	849	1.5
	NHS Newcastle Gateshead	493,900	0.90	0.88	0.88	0.83	0.83	0.84	0.76	0.93	741	10.1
	NHS North Tyneside	202,500	1.01	0.94	0.96	0.98	0.92	0.90	0.78	1.04	889	3.4
	NHS Northumberland	315,300	0.75	0.75	0.75	0.73	0.77	0.77	0.68	0.86	825	1.6
	NHS South Tyneside	148,700	1.01	1.04	0.98	0.93	0.86	0.85	0.72	1.02	848	4.1
	NHS Sunderland	277,200	1.03	0.98	1.00	0.95	0.96	0.94	0.83	1.07	916	4.1
North Yorkshire and Humber	NHS East Riding of Yorkshire	315,100	0.84	0.84	0.82	0.80	0.79	0.79	0.70	0.89	866	1.9
	NHS Hambleton, Richmondshire and Whitby	151,800	0.62	0.63	0.67	0.72	0.74	0.72	0.60	0.86	771	2.7
	NHS Harrogate and Rural District	157,000	0.85	0.83	0.89	0.87	0.91	0.96	0.82	1.13	1,006	3.7
	NHS Hull	259,000	1.03	0.99	0.95	0.97	1.01	1.08	0.95	1.23	934	5.9
	NHS North East Lincolnshire	159,600	0.99	1.08	1.04	1.02	0.97	0.99	0.84	1.16	959	2.6
	NHS North Lincolnshire	169,800	0.75	0.84	0.89	0.95	0.90	0.90	0.77	1.05	901	4.0
	NHS Scarborough and Ryedale	110,700	0.88	0.83	0.86	0.84	0.81	0.80	0.66	0.98	867	2.5
NHS Vale of York	355,400	0.87	0.88	0.93	0.92	0.90	0.89	0.79	0.99	861	4.0	
South Yorkshire and Bassetlaw	NHS Barnsley	239,300	1.12	1.10	1.05	1.03	1.03	0.98	0.86	1.11	953	2.1
	NHS Bassetlaw	114,500	0.82	0.81	0.88	0.82	0.82	0.83	0.68	1.01	856	2.6
	NHS Doncaster	304,800	0.94	0.98	0.97	0.93	0.96	0.95	0.85	1.07	915	4.7
	NHS Rotherham	260,800	1.13	1.08	1.07	1.05	1.04	0.99	0.87	1.12	959	6.4
	NHS Sheffield	569,700	1.14	1.11	1.12	1.11	1.09	1.04	0.95	1.13	895	16.3
West Yorkshire	NHS Airedale, Wharfedale and Craven	159,300	0.82	0.78	0.79	0.79	0.83	0.86	0.73	1.02	873	11.1
	NHS Bradford City	83,900	1.91	1.81	1.90	1.96	2.13	2.12	1.76	2.56	1,299	72.2
	NHS Bradford Districts	337,700	1.13	1.16	1.23	1.21	1.18	1.21	1.09	1.35	1,024	28.7
	NHS Calderdale	208,400	1.10	1.02	0.96	0.90	0.86	0.86	0.74	1.00	821	10.3
	NHS Greater Huddersfield	243,800	0.95	0.93	0.98	0.95	0.98	0.98	0.86	1.11	911	17.4
	NHS Leeds North	200,800	1.01	0.99	0.96	0.91	0.88	0.88	0.76	1.03	842	17.4
	NHS Leeds South and East	249,700	0.95	0.97	0.95	0.96	0.98	0.97	0.84	1.11	793	18.3
	NHS Leeds West	323,600	0.85	0.82	0.80	0.86	0.90	0.91	0.80	1.03	742	10.8
	NHS North Kirklees	190,500	1.15	1.18	1.14	1.24	1.23	1.17	1.01	1.34	1,029	25.3
NHS Wakefield	333,800	0.83	0.85	0.86	0.86	0.85	0.81	0.72	0.91	785	4.6	
Arden, Herefordshire and Worcestershire	NHS Coventry and Rugby	448,800	1.23	1.25	1.30	1.27	1.22	1.16	1.06	1.27	978	22.2
	NHS Herefordshire	188,100	0.77	0.78	0.79	0.77	0.77	0.85	0.73	0.99	904	1.8
	NHS Redditch and Bromsgrove	180,500	0.90	0.89	0.92	0.87	0.86	0.87	0.74	1.01	859	6.0
	NHS South Warwickshire	261,500	0.91	0.92	0.89	0.88	0.89	0.90	0.80	1.03	914	7.0
	NHS South Worcestershire	298,600	0.82	0.83	0.85	0.81	0.81	0.80	0.71	0.91	827	3.7
	NHS Warwickshire North	189,100	1.15	1.12	1.03	1.04	1.07	1.04	0.91	1.20	1,031	6.5
NHS Wyre Forest	99,500	0.89	0.91	0.88	0.88	0.98	0.89	0.73	1.09	945	2.8	
Birmingham and the Black Country	NHS Birmingham Cross City	740,800	1.44	1.45	1.45	1.44	1.43	1.45	1.36	1.55	1,161	35.2
	NHS Birmingham South and Central	202,300	1.64	1.67	1.72	1.71	1.69	1.64	1.45	1.86	1,261	40.4
	NHS Dudley	316,500	0.96	0.89	0.95	0.96	0.93	0.92	0.82	1.04	901	10.0
	NHS Sandwell and West Birmingham	487,700	1.79	1.75	1.72	1.71	1.68	1.70	1.57	1.83	1,355	45.3
	NHS Solihull	210,400	0.95	0.92	0.89	0.87	0.83	0.86	0.74	0.99	846	10.9
	NHS Walsall	276,100	1.37	1.35	1.33	1.35	1.35	1.33	1.19	1.48	1,210	21.1
NHS Wolverhampton	254,400	1.22	1.13	1.14	1.15	1.16	1.13	1.00	1.28	1,010	32.0	

Table 2.5. Continued

UK area	Name	Total population	2010 O/E	2011 O/E	2012 O/E	2013 O/E	2014 O/E	2015 O/E	2015			% non-White
									95% LCL	95% UCL	Crude rate pmp	
Derbyshire and Nottinghamshire	NHS Erewash	96,300	0.99	1.00	0.98	0.90	0.88	0.95	0.78	1.17	924	3.2
	NHS Hardwick	110,500	0.85	0.79	0.79	0.76	0.77	0.75	0.60	0.92	760	1.8
	NHS Mansfield & Ashfield	196,400	0.97	0.95	0.91	0.94	0.95	0.95	0.82	1.10	927	2.5
	NHS Newark & Sherwood	118,700	1.07	1.14	1.09	1.04	0.99	0.92	0.76	1.10	943	2.4
	NHS North Derbyshire	272,900	0.79	0.80	0.79	0.78	0.76	0.73	0.64	0.84	773	2.5
	NHS Nottingham City	318,900	1.24	1.17	1.15	1.15	1.13	1.20	1.07	1.35	897	28.5
	NHS Nottingham North & East	149,500	0.88	0.90	0.90	0.87	0.83	0.80	0.67	0.96	789	6.2
	NHS Nottingham West	112,300	1.06	1.00	1.04	1.07	1.07	1.07	0.90	1.28	1,069	7.3
	NHS Rushcliffe	114,500	0.85	0.87	0.77	0.82	0.76	0.72	0.58	0.90	725	6.9
NHS Southern Derbyshire	523,800	1.03	1.02	0.98	0.98	1.00	1.00	0.92	1.09	945	11.0	
East Anglia	NHS Cambridgeshire and Peterborough*	876,400	0.90	0.94	0.90	0.93	0.91	0.87	0.81	0.94	806	9.5
	NHS Great Yarmouth & Waveney	214,800	1.01	0.99	0.96	0.97	0.95	0.99	0.87	1.13	1,047	2.7
	NHS Ipswich and East Suffolk*	399,500	0.83	0.83	0.82	0.85	0.84	0.90	0.82	1.00	924	5.6
	NHS North Norfolk	170,600	0.98	0.92	0.88	0.97	0.95	0.94	0.81	1.08	1,085	1.5
	NHS Norwich	198,200	0.88	0.83	0.82	0.90	0.89	0.92	0.79	1.08	832	7.3
	NHS South Norfolk*	243,400	0.81	0.82	0.83	0.88	0.84	0.87	0.77	1.00	912	2.6
	NHS West Norfolk*	174,100	0.85	0.80	0.77	0.75	0.74					2.6
	NHS West Suffolk*	226,300	0.83	0.82	0.81	0.81	0.77					4.6
Essex	NHS Basildon and Brentwood	257,800	0.96	1.00	0.97	1.05	1.02	0.99	0.87	1.12	927	7.1
	NHS Castle Point, Rayleigh and Rochford	174,300	0.85	0.80	0.78	0.83	0.89	0.85	0.72	0.99	895	3.0
	NHS Mid Essex*	385,700	0.85	0.84	0.80	0.84	0.85	0.86	0.77	0.96	850	4.4
	NHS North East Essex*	325,100	0.90	0.93	0.90	0.87	0.91	0.88	0.79	0.99	886	5.5
	NHS Southend	178,700	0.92	0.93	0.95	1.00	0.96	0.96	0.82	1.12	912	8.4
	NHS Thurrock	165,200	0.96	0.98	0.98	0.99	0.98	0.97	0.82	1.14	823	14.1
	NHS West Essex*	300,200	0.74	0.73	0.83	0.87	0.92	0.91	0.80	1.02	859	8.2
Hertfordshire and the South Midlands	NHS Bedfordshire*	440,300	0.90	0.87	0.90	0.91	0.92	0.91	0.83	1.01	861	11.2
	NHS Corby	66,900	0.81	0.87	0.91	0.85	0.87	0.92	0.71	1.21	808	4.5
	NHS East and North Hertfordshire*	559,100	0.86	0.89	0.88	0.90	0.93	0.94	0.86	1.02	859	10.4
	NHS Herts Valleys	588,200	0.97	0.95	0.94	0.93	0.95	0.95	0.87	1.04	865	14.6
	NHS Luton*	214,700	1.24	1.31	1.34	1.41	1.42	1.45	1.28	1.65	1,132	45.3
	NHS Milton Keynes	267,800	0.89	0.91	0.91	0.93	1.01	1.02	0.89	1.15	863	19.6
	NHS Nene	640,000	0.90	0.91	0.90	0.90	0.91	0.88	0.81	0.96	834	9.1
Leicestershire and Lincolnshire	NHS East Leicestershire and Rutland	325,900	0.80	0.80	0.79	0.78	0.78	0.79	0.70	0.89	801	9.8
	NHS Leicester City	342,600	1.68	1.71	1.73	1.75	1.75	1.73	1.58	1.90	1,325	49.5
	NHS Lincolnshire East	232,000	0.83	0.85	0.88	0.89	0.85	0.84	0.74	0.96	935	2.0
	NHS Lincolnshire West	234,300	0.83	0.87	0.82	0.85	0.86	0.84	0.73	0.97	811	3.0
	NHS South Lincolnshire*	146,000	0.72	0.74	0.76	0.72	0.73	0.72	0.60	0.87	754	2.3
	NHS South West Lincolnshire	124,300	0.73	0.75	0.71	0.68	0.66	0.64	0.52	0.80	668	2.3
	NHS West Leicestershire	387,500	0.90	0.91	0.89	0.90	0.90	0.89	0.80	0.99	867	6.9
Shropshire and Staffordshire	NHS Cannock Chase	134,900	0.92	0.94	0.84	0.93	0.92	0.91	0.76	1.09	897	2.4
	NHS East Staffordshire	125,700	0.77	0.74	0.76	0.76	0.76	0.74	0.61	0.91	724	9.0
	NHS North Staffordshire	216,700	0.91	0.96	0.92	0.95	0.91	0.90	0.78	1.03	918	3.5
	NHS Shropshire	311,400	0.86	0.85	0.84	0.78	0.79	0.81	0.71	0.91	857	2.0
	NHS South East Staffs and Seisdon and Peninsular	224,800	0.96	0.97	0.90	0.88	0.86	0.85	0.74	0.98	876	3.6
	NHS Stafford and Surrounds	152,200	0.88	0.91	0.91	0.88	0.93	0.96	0.82	1.12	1,005	4.7
	NHS Stoke on Trent	259,900	1.13	1.13	1.09	1.07	1.13	1.04	0.92	1.18	951	11.0
	NHS Telford & Wrekin	171,200	1.04	1.02	0.99	1.01	1.00	1.07	0.92	1.24	976	7.3

Table 2.5. Continued

UK area	Name	Total population	2010 O/E	2011 O/E	2012 O/E	2013 O/E	2014 O/E	2015 O/E	2015			% non-White
									95% LCL	95% UCL	Crude rate pmp	
London	NHS Barking & Dagenham	202,000	1.27	1.39	1.43	1.47	1.52	1.53	1.34	1.75	1,089	41.7
	NHS Barnet	379,700	1.41	1.40	1.45	1.44	1.44	1.46	1.33	1.60	1,219	35.9
	NHS Camden	241,100	1.13	1.15	1.15	1.15	1.16	1.18	1.03	1.34	929	33.7
	NHS City and Hackney	277,800	1.32	1.34	1.40	1.40	1.42	1.39	1.23	1.56	976	44.6
	NHS Enfield	328,400	1.37	1.46	1.49	1.49	1.51	1.51	1.37	1.66	1,227	39.0
	NHS Haringey	272,900	1.31	1.45	1.54	1.59	1.62	1.64	1.47	1.82	1,257	39.5
	NHS Havering	249,100	0.83	0.87	0.89	0.85	0.84	0.87	0.76	1.00	807	12.3
	NHS Islington	227,700	1.18	1.24	1.35	1.38	1.38	1.40	1.24	1.59	1,032	31.8
	NHS Newham	332,800	1.52	1.64	1.68	1.76	1.85	1.92	1.75	2.11	1,304	71.0
	NHS Redbridge	296,800	1.34	1.32	1.37	1.43	1.44	1.45	1.30	1.61	1,156	57.5
	NHS Tower Hamlets	295,200	1.21	1.23	1.33	1.40	1.48	1.55	1.39	1.74	999	54.8
	NHS Waltham Forest	271,200	1.37	1.46	1.41	1.47	1.59	1.61	1.45	1.79	1,246	47.8
	NHS Brent	324,000	2.07	2.06	2.10	2.07	2.12	2.17	2.00	2.35	1,741	63.7
	NHS Central London (Westminster)	174,100	1.01	1.08	1.07	1.12	1.14	1.13	0.97	1.31	970	36.2
	NHS Ealing	343,100	1.86	1.85	1.91	1.89	1.90	1.97	1.81	2.14	1,609	51.0
	NHS Hammersmith and Fulham	179,400	1.29	1.32	1.33	1.27	1.31	1.30	1.13	1.50	1,020	31.9
	NHS Harrow	247,100	1.79	1.84	1.82	1.73	1.72	1.72	1.55	1.90	1,501	57.8
	NHS Hillingdon	297,700	1.35	1.43	1.47	1.48	1.48	1.44	1.30	1.60	1,182	39.4
	NHS Hounslow	268,800	1.38	1.43	1.46	1.53	1.54	1.56	1.41	1.74	1,258	48.6
	NHS West London (Kensington and Chelsea, Queen's Park and Paddington)	225,900	1.17	1.20	1.18	1.17	1.22	1.18	1.04	1.35	1,018	33.4
	NHS Bexley	242,100	1.27	1.26	1.25	1.24	1.27	1.29	1.15	1.45	1,156	18.1
	NHS Bromley	324,900	1.02	1.01	0.98	0.97	0.97	1.05	0.94	1.17	973	15.7
	NHS Croydon	379,000	1.30	1.34	1.39	1.44	1.47	1.47	1.34	1.61	1,237	44.9
	NHS Greenwich	274,800	1.21	1.23	1.22	1.39	1.42	1.44	1.29	1.61	1,110	37.5
	NHS Kingston	173,500	1.11	1.14	1.13	1.06	1.07	1.03	0.88	1.21	859	25.5
	NHS Lambeth	324,400	1.52	1.58	1.65	1.68	1.75	1.81	1.65	1.99	1,328	42.9
	NHS Lewisham	297,300	1.45	1.50	1.52	1.55	1.53	1.54	1.39	1.71	1,177	46.5
	NHS Merton	204,600	1.26	1.25	1.29	1.28	1.36	1.43	1.26	1.62	1,178	35.1
	NHS Richmond	194,700	0.74	0.73	0.73	0.76	0.76	0.75	0.63	0.89	673	14.0
	NHS Southwark	308,900	1.62	1.70	1.76	1.79	1.83	1.88	1.71	2.06	1,382	45.8
NHS Sutton	200,100	1.17	1.19	1.21	1.16	1.15	1.18	1.03	1.35	1,049	21.4	
NHS Wandsworth	314,500	1.29	1.26	1.21	1.18	1.28	1.31	1.18	1.47	982	28.6	
Bath, Gloucestershire, Swindon and Wiltshire	NHS Bath and North East Somerset	184,900	0.82	0.79	0.80	0.81	0.80	0.82	0.70	0.97	763	5.4
	NHS Gloucestershire	617,200	0.88	0.88	0.90	0.89	0.88	0.87	0.80	0.94	868	4.6
	NHS Swindon	222,800	0.88	0.91	0.93	0.95	0.96	0.99	0.86	1.13	898	10.0
	NHS Wiltshire	486,100	0.73	0.75	0.72	0.73	0.73	0.74	0.67	0.82	739	3.4
Bristol, North Somerset, Somerset and South Gloucestershire	NHS Bristol	449,300	1.21	1.22	1.26	1.29	1.29	1.25	1.14	1.37	993	16.0
	NHS North Somerset	209,900	0.90	0.91	0.94	0.93	0.94	0.92	0.80	1.05	953	2.7
	NHS Somerset	545,400	0.86	0.87	0.84	0.81	0.82	0.79	0.72	0.87	831	2.0
NHS South Gloucestershire	274,700	0.97	0.94	0.93	0.98	0.98	0.93	0.82	1.05	888	5.0	
Devon, Cornwall and Isles of Scilly	NHS Kernow	551,700	1.01	0.98	0.97	0.96	0.95	0.95	0.87	1.03	1,004	1.8
	NHS North, East, West Devon	890,600	0.94	0.93	0.93	0.92	0.92	0.91	0.85	0.97	915	3.0
	NHS South Devon and Torbay	278,600	1.07	1.05	1.03	1.08	1.06	1.04	0.93	1.16	1,138	2.1
Kent and Medway	NHS Ashford	124,300	1.04	1.02	1.04	1.00	1.01	0.98	0.82	1.18	934	6.3
	NHS Canterbury and Coastal	207,700	0.99	0.97	0.96	0.99	1.06	1.05	0.92	1.21	1,002	5.9
	NHS Dartford, Gravesham and Swanley	258,200	1.08	1.07	1.07	1.11	1.13	1.11	0.98	1.25	1,022	13.0

Table 2.5. Continued

UK area	Name	Total population	2010 O/E	2011 O/E	2012 O/E	2013 O/E	2014 O/E	2015 O/E	2015			% non-White
									95% LCL	95% UCL	Crude rate pmp	
Kent and Medway cont.	NHS Medway	276,500	0.86	0.85	0.88	0.92	0.91	0.92	0.81	1.05	814	10.4
	NHS South Kent Coast	205,500	0.81	0.84	0.83	0.78	0.83	0.83	0.71	0.96	861	4.5
	NHS Swale	112,500	1.04	1.07	1.16	1.17	1.11	1.09	0.90	1.30	1,022	3.8
	NHS Thanet	139,800	0.99	1.00	1.05	1.11	1.06	1.00	0.85	1.18	1,009	4.5
	NHS West Kent	476,800	0.79	0.80	0.82	0.80	0.83	0.80	0.72	0.89	770	4.9
Surrey and Sussex	NHS Brighton & Hove	285,300	0.84	0.83	0.87	0.83	0.88	0.87	0.76	0.99	729	10.9
	NHS Coastal West Sussex	495,000	0.84	0.80	0.82	0.82	0.82	0.84	0.77	0.93	905	3.8
	NHS Crawley	110,900	1.17	1.08	1.01	0.94	0.94	0.90	0.73	1.12	758	20.1
	NHS East Surrey	182,000	0.85	0.78	0.85	0.90	0.84	0.84	0.71	0.99	791	8.3
	NHS Eastbourne, Hailsham and Seaford	188,100	0.80	0.76	0.82	0.83	0.82	0.81	0.69	0.94	861	4.4
	NHS Guildford and Waverley	206,100	0.69	0.65	0.71	0.67	0.68	0.68	0.57	0.81	631	7.2
	NHS Hastings & Rother	184,400	0.79	0.76	0.75	0.81	0.80	0.81	0.69	0.94	862	4.6
	NHS High Weald Lewes Havens	171,600	0.66	0.65	0.72	0.69	0.71	0.74	0.63	0.88	781	3.1
	NHS Horsham and Mid Sussex	230,300	0.70	0.74	0.69	0.70	0.70	0.68	0.58	0.80	673	4.9
	NHS North West Surrey	343,000	0.96	0.96	0.96	0.95	0.98	0.98	0.88	1.09	924	12.5
	NHS Surrey Downs	287,000	0.92	0.92	0.90	0.89	0.86	0.83	0.73	0.95	829	9.1
NHS Surrey Heath	95,900	0.97	0.95	0.95	0.86	0.82	0.82	0.66	1.03	803	9.3	
Thames Valley	NHS Aylesbury Vale	207,000	0.96	0.93	0.92	0.91	0.90	0.88	0.75	1.02	826	9.7
	NHS Bracknell and Ascot	137,000	0.85	0.82	0.81	0.92	0.95	0.93	0.77	1.11	832	9.5
	NHS Chiltern	324,000	0.87	0.83	0.83	0.87	0.86	0.83	0.74	0.94	799	15.8
	NHS Newbury and District	106,400	0.93	0.97	0.93	0.97	1.00	0.98	0.81	1.20	940	4.4
	NHS North & West Reading	100,300	0.87	0.87	0.86	0.86	0.83	0.86	0.69	1.06	817	10.4
	NHS Oxfordshire	663,600	0.88	0.90	0.91	0.91	0.91	0.87	0.80	0.94	797	9.3
	NHS Slough	145,700	1.76	1.88	1.87	1.87	1.88	1.93	1.69	2.21	1,448	54.3
	NHS South Reading	111,000	1.51	1.39	1.30	1.43	1.50	1.47	1.23	1.75	1,072	30.5
	NHS Windsor, Ascot and Maidenhead	141,400	0.95	0.98	0.99	1.00	1.07	1.06	0.90	1.26	983	14.7
	NHS Wokingham	160,400	0.86	0.94	0.91	0.93	0.88	0.87	0.74	1.03	829	11.6
Wessex	NHS Dorset	765,700	0.84	0.80	0.80	0.79	0.80	0.78	0.73	0.85	823	4.0
	NHS Fareham and Gosport	199,500	0.87	0.86	0.85	0.91	0.92	0.95	0.83	1.10	963	3.4
	NHS Isle of Wight	139,400	0.56	0.60	0.64	0.75	0.75	0.72	0.60	0.87	803	2.7
	NHS North East Hampshire and Farnham	209,200	0.83	0.83	0.84	0.89	0.89	0.92	0.79	1.06	851	9.7
	NHS North Hampshire	220,800	0.72	0.69	0.69	0.71	0.75	0.76	0.65	0.89	725	6.4
	NHS Portsmouth	211,800	0.89	0.93	0.96	0.99	0.93	0.96	0.83	1.12	789	11.6
	NHS South Eastern Hampshire	211,900	0.91	0.90	0.85	0.88	0.90	0.89	0.77	1.02	916	3.1
	NHS Southampton	249,500	0.95	0.99	1.02	0.99	0.98	1.03	0.90	1.18	814	14.1
NHS West Hampshire	554,900	0.78	0.78	0.77	0.77	0.77	0.74	0.68	0.82	768	3.9	
Wales	Betsi Cadwaladr University	694,500	0.93	0.88	0.90	0.82	0.85	0.91	0.84	0.98	929	2.5
	Powys Teaching	132,600	0.93	0.90	0.89	0.86	0.81	0.83	0.69	0.99	920	1.6
	Hywel Dda	383,200	0.97	0.98	0.92	0.95	0.95	0.96	0.87	1.06	1,005	2.2
	Abertawe Bro Morgannwg University	525,500	1.28	1.27	1.24	1.19	1.13	1.13	1.04	1.23	1,098	3.9
	Cwm Taf	296,700	1.31	1.36	1.28	1.27	1.23	1.18	1.06	1.31	1,119	2.6
	Aneurin Bevan	581,800	1.13	1.11	1.11	1.09	1.10	1.07	0.99	1.16	1,047	3.9
	Cardiff and Vale University	484,800	1.07	1.06	1.04	1.04	1.00	1.00	0.91	1.10	862	12.2
Scotland	Ayrshire and Arran	370,600	1.12	1.06	1.04	1.01	0.98	0.97	0.88	1.07	1,007	1.2
	Borders	114,000	1.09	0.98	0.93	0.90	0.85	0.84	0.69	1.02	921	1.3
	Dumfries and Galloway	149,700	0.92	0.90	0.89	0.83	0.82	0.82	0.70	0.98	909	1.2
	Fife	368,100	0.96	1.01	0.98	0.98	0.92	0.93	0.84	1.04	926	2.4

Table 2.5. Continued

UK area	Name	Total population	2010 O/E	2011 O/E	2012 O/E	2013 O/E	2014 O/E	2015 O/E	2015		Crude rate pmp	% non-White
									95% LCL	95% UCL		
Scotland cont.	Forth Valley	302,700	0.96	0.90	0.87	0.87	0.86	0.87	0.77	0.98	852	2.2
	Grampian	587,800	0.93	0.93	0.96	0.95	0.88	0.91	0.83	0.99	861	4.0
	Greater Glasgow and Clyde	1,149,900	1.07	1.06	1.08	1.07	1.04	1.06	1.00	1.13	983	7.3
	Highland	321,000	0.98	0.90	0.86	0.82	0.80	0.86	0.76	0.96	907	1.3
	Lanarkshire	654,500	0.96	0.94	0.99	0.97	0.95	0.97	0.89	1.05	934	2.0
	Lothian	867,800	0.85	0.81	0.82	0.80	0.79	0.80	0.74	0.86	725	5.6
	Orkney	21,700	0.93	0.79	0.77	0.83	0.62	0.68	0.42	1.12	738	0.7
	Shetland	23,200	0.57	0.50	0.48	0.51	0.49	0.65	0.39	1.08	647	1.5
	Tayside	415,000	1.04	1.02	0.98	0.94	0.92	0.95	0.86	1.04	942	3.2
	Western Isles	27,100	0.85	0.70	0.60	0.58	0.73	0.90	0.62	1.32	997	0.9
Northern Ireland	Belfast	353,800	1.18	1.15	1.17	1.15	1.15	1.14	1.02	1.26	975	3.2
	Northern	471,200	1.01	1.04	1.03	1.02	1.02	1.00	0.91	1.10	913	1.2
	Southern	373,000	0.97	1.00	0.96	0.96	0.97	1.01	0.90	1.12	855	1.2
	South Eastern	354,700	0.89	0.90	0.88	0.86	0.83	0.90	0.80	1.00	837	1.3
	Western	299,000	1.13	1.09	1.00	0.98	1.05	1.10	0.98	1.23	963	1.0

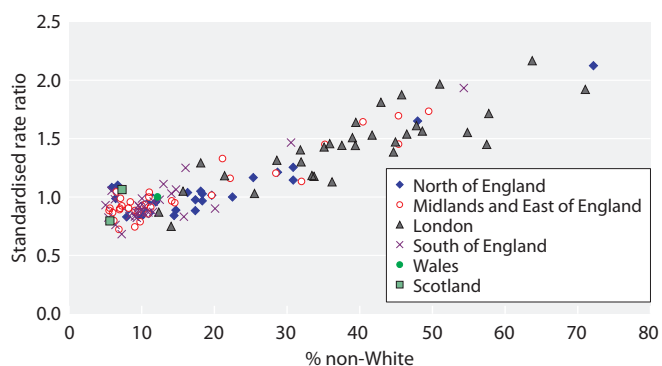


Fig. 2.3. Standardised prevalence ratios for CCG/HB areas by percentage non-White on 31/12/2015 (excluding areas with <5% ethnic minorities)

Table 2.7. Median time on RRT of prevalent patients on 31/12/2015

Modality	N	Median time treated (years)
Haemodialysis	24,027	3.3
Peritoneal dialysis	3,513	1.6
Transplant	30,392	10.2
All RRT	57,932	6.2

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

Table 2.6. Standardised prevalence rate ratio of RRT for each region in England and for Wales, Scotland and Northern Ireland in 2015

UK area	Total population	O/E	95% LCL	95% UCL	Crude rate pmp
North England	15,198,200	0.92	0.91	0.94	859.1
Midlands and East of England	16,342,200	0.98	0.97	1.00	916.2
London	8,416,500	1.49	1.46	1.52	1,164.8
South England	13,908,900	0.90	0.88	0.92	861.8
Wales	3,082,400	0.99	0.96	1.03	955.7
Scotland	5,327,700	0.90	0.88	0.93	858.5
Northern Ireland	1,829,700	0.97	0.92	1.02	844.9

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

Bold – higher than expected prevalence ratio

Table 2.8. Median age of prevalent RRT patients by treatment modality in renal centres on 31/12/2015

Centre	Median age				Centre	Median age			
	HD	PD	Transplant	RRT		HD	PD	Transplant	RRT
England					Redng	69.5	67.7	57.4	62.3
B Heart	68.0	67.3	52.7	64.0	Salford	63.3	61.7	52.5	58.1
B QEH	65.4	59.8	52.9	58.2	Sheff	67.0	65.5	53.3	58.9
Basldn	67.7	57.9	53.5	63.0	Shrew	69.0	57.7	55.8	63.7
Bradfd	63.2	53.3	52.5	55.5	Stevng	67.9	68.4	52.9	61.9
Brightn	67.8	66.3	54.5	60.8	Sthend	67.9	70.4	54.7	63.5
Bristol	69.5	68.0	54.5	58.8	Stoke	68.0	69.0	52.4	60.1
Carlis	70.3	69.6	53.9	60.9	Sund	65.8	64.7	55.3	59.6
Carsh	68.9	65.6	54.8	61.9	Truro	69.6	64.2	56.9	62.0
Chelms	69.3	70.2	58.9	64.5	Wirral	68.0	65.9	55.8	65.4
Colchr	73.1			73.1	Wolve	65.9	63.4	51.8	60.6
Covnt	68.3	64.6	52.6	58.3	York	67.7	65.4	54.0	58.8
Derby	67.2	63.5	53.8	60.5	N Ireland				
Donc	68.2	69.4	56.7	64.1	Antrim	73.8	61.3	52.5	63.5
Dorset	72.2	73.3	57.6	65.0	Belfast	69.5	67.0	51.9	55.0
Dudley	66.6	60.6	56.7	64.7	Newry	65.8	75.3	53.7	60.6
Exeter	72.4	67.7	54.9	63.5	Ulster	73.8	69.5	52.7	66.5
Glouc	71.5	66.7	54.5	65.1	West NI	71.6	61.9	50.4	57.7
Hull	68.8	65.0	53.3	59.4	Scotland				
Ipswi	69.5	69.4	55.5	62.2	Abrdn	66.3	53.2	50.8	57.1
Kent	69.2	64.3	55.2	61.0	Airdrie	65.0	60.4	52.7	57.0
L Barts	61.3	60.9	51.5	56.0	D & Gall	67.0	68.6	54.1	58.9
L Guys	61.0	61.8	51.8	55.0	Dundee	67.8	63.9	53.5	60.7
L Kings	63.8	58.6	55.0	59.5	Edinb	60.1	62.8	53.5	56.0
L Rfree	69.1	63.8	53.2	58.0	Glasgw	65.5	62.2	53.3	57.3
L St.G	65.9	71.2	54.5	60.5	Inverns	66.5	59.2	51.0	56.4
L West	66.5	65.4	55.5	59.7	Klmarnk	64.5	61.0	54.2	58.5
Leeds	63.2	52.9	53.8	56.0	Krkldy	69.2	62.5	54.4	62.0
Leic	67.7	66.4	53.9	59.5	Wales				
Liv Ain	68.7	59.5	42.5	67.5	Bangor	68.9	69.0	55.8	64.2
Liv Roy	61.2	61.0	53.7	55.7	Cardff	68.0	65.8	53.8	58.0
M RI	64.0	66.0	52.3	55.6	Clwyd	67.2	64.9	55.6	63.7
Middlbr	67.4	53.5	54.0	58.4	Swanse	71.7	62.5	56.8	63.8
Newc	62.6	69.3	54.8	57.3	Wrexm	72.0	57.6	53.2	58.7
Norwch	70.7	63.7	55.0	61.5	England	67.2	64.4	53.9	59.0
Nottm	71.3	65.0	53.2	58.5	N Ireland	71.0	68.7	52.1	57.8
Oxford	67.8	65.6	53.4	56.5	Scotland	65.4	61.1	53.2	57.5
Plymth	71.0	64.3	56.8	60.2	Wales	69.1	64.1	54.3	59.9
Ports	67.5	65.1	54.6	59.5	UK	67.2	64.2	53.8	59.0
Prestn	66.1	67.6	54.3	60.1					

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

UK RRT prevalent patients by using the age and gender distribution of the UK population by CCG/HB (from mid-2015 population estimates), allowed estimation of crude prevalence by age and gender (figure 2.5). This shows a progressive increase in prevalence with age, peaking at 2,270 pmp (similar to the 2,274 pmp estimate in 2014) in the age group 75–79 years then a rapid decline thereafter. Crude RRT prevalence in males exceeded that of females for all age groups. The difference was smallest

in younger patients and was greatest from the age of 70 years onwards. RRT prevalence in males was highest in the 75–79 years group (3,074 pmp) and for females also in the same age group at 1,589 pmp. Survival on RRT by gender is described in chapter 5.

Ethnicity

Key to understanding differences in RRT prevalence between regions is understanding the ethnic diversity of

Table 2.9. Percentage of prevalent RRT patients in each age group by centre on 31/12/2015

Centre	N	Percentage of patients			
		18–39 years	40–64 years	65–74 years	75+ years
England					
B Heart	657	10.0	42.2	22.5	25.3
B QEH	2,254	14.3	51.2	19.3	15.3
Basldn	275	10.5	45.1	21.5	22.9
Bradfd	581	22.0	48.9	16.4	12.7
Brightn	952	11.9	46.6	22.4	19.1
Bristol	1,477	14.7	48.1	20.7	16.5
Carlis	281	12.8	47.3	19.6	20.3
Carsh	1,582	9.4	46.3	23.3	21.0
Chelms	285	9.1	43.5	24.6	22.8
Colchr	120	4.2	21.7	27.5	46.7
Covnt	958	13.2	50.6	19.0	17.2
Derby	537	11.5	48.6	23.6	16.2
Donc	301	10.6	41.5	23.6	24.3
Dorset	679	9.3	40.4	26.4	24.0
Dudley	312	9.0	42.9	24.0	24.0
Exeter	962	10.1	42.6	24.1	23.2
Glouc	443	8.6	41.3	24.6	25.5
Hull	858	13.3	48.8	21.3	16.6
Ipswi	407	9.1	47.7	23.8	19.4
Kent	1,042	11.5	47.3	23.5	17.7
L Barts	2,286	15.6	56.9	17.1	10.4
L Guys	2,011	19.1	54.5	16.3	10.1
L Kings	1,085	9.5	53.4	18.6	18.5
L Rfree	2,088	15.8	49.5	18.0	16.8
L St.G	846	13.4	48.2	22.9	15.5
L West	3,320	11.7	52.1	21.7	14.5
Leeds	1,524	16.7	52.6	18.9	11.8
Leic	2,186	12.6	48.7	23.1	15.6
Liv Ain	228	7.0	36.0	24.6	32.5
Liv Roy	1,292	15.4	58.0	17.4	9.1
M RI	1,894	17.2	54.1	18.4	10.3
Middlbr	893	14.1	49.5	21.2	15.2
Newc	1,010	14.9	52.7	20.1	12.4
Norwch	741	10.9	46.4	22.7	20.0
Nottm	1,114	14.4	48.7	19.8	17.1
Oxford	1,698	14.0	53.9	19.3	12.8
Plymth	505	11.7	49.5	23.0	15.8
Ports	1,671	12.6	49.7	21.5	16.3
Prestn	1,218	12.0	48.7	25.0	14.3
Redng	778	8.7	48.5	23.8	19.0
Salford	964	13.7	52.7	20.7	12.9
Sheff	1,325	14.0	51.2	19.0	15.8
Shrew	370	8.9	43.8	25.1	22.2
Stevng	827	10.4	46.8	19.6	23.2
Sthend	246	12.6	41.9	19.5	26.0
Stoke	789	12.8	47.4	20.3	19.5
Sund	459	11.1	51.0	22.2	15.7
Truro	417	10.8	45.1	23.5	20.6
Wirral	228	6.6	42.5	20.6	30.3
Wolve	581	10.7	49.7	20.1	19.4
York	489	15.7	47.6	20.7	16.0

Table 2.9. Continued

Centre	N	Percentage of patients			
		18–39 years	40–64 years	65–74 years	75+ years
N Ireland					
Antrim	239	9.6	44.4	21.8	24.3
Belfast	773	18.5	52.4	16.6	12.5
Newry	226	12.8	49.6	17.3	20.4
Ulster	170	10.0	35.9	22.9	31.2
West NI	293	14.0	44.7	21.5	19.8
Scotland					
Abrdn	532	17.7	51.3	19.5	11.5
Airdrie	425	14.8	52.0	18.6	14.6
D & Gall	130	11.5	45.4	24.6	18.5
Dundee	421	7.8	51.8	21.1	19.2
Edinb	773	14.7	58.6	17.7	8.9
Glasgw	1,715	14.3	55.8	18.7	11.2
Inverns	253	10.7	57.3	20.2	11.9
Klmarnk	309	8.1	57.9	22.7	11.3
Krkldy	295	10.2	47.8	23.7	18.3
Wales					
Bangor	182	10.4	42.9	25.3	21.4
Cardff	1,613	14.1	51.2	21.0	13.6
Clwyd	185	13.5	42.2	23.8	20.5
Swanse	756	10.1	43.0	22.6	24.3
Wrexm	293	16.0	45.1	15.7	23.2
England	50,046	13.2	49.8	20.7	16.3
N Ireland	1,701	14.9	47.9	18.9	18.3
Scotland	4,853	13.3	54.5	19.6	12.5
Wales	3,029	13.0	47.5	21.3	18.1
UK	59,629	13.3	50.0	20.6	16.1
Range (Min:Max)		(4.2, 22.0)	(21.7, 58.6)	(15.7, 27.5)	(8.9, 46.7)

the patient groups. As such, the completeness of ethnicity data provided by renal centres is important. Sixty-one of the 70 centres (87.1%) providing patient-level data provided ethnicity data that were at least 90% complete (table 2.10), an improvement on only 36 centres in

2006. Overall ethnicity completeness for prevalent RRT patients has reached a stable 93.3% for the UK in 2015 compared to 93.6% in 2014. Data completeness is very high in England, Wales and Northern Ireland (98.8%, 99.6% and 98.6% respectively), but much lower in Scotland (30.1%). Completeness in Scotland is improving,

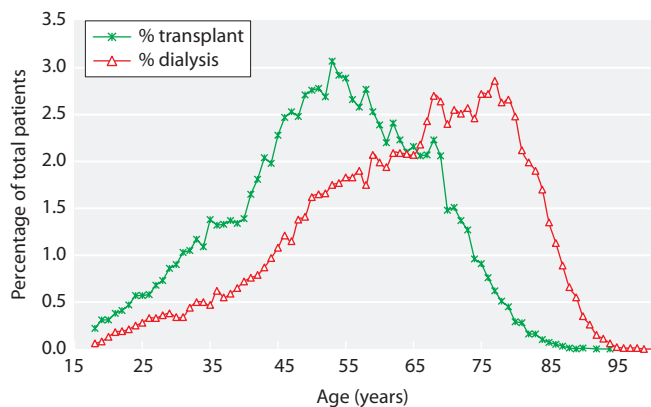


Fig. 2.4. Age profile of prevalent RRT patients by modality on 31/12/2015

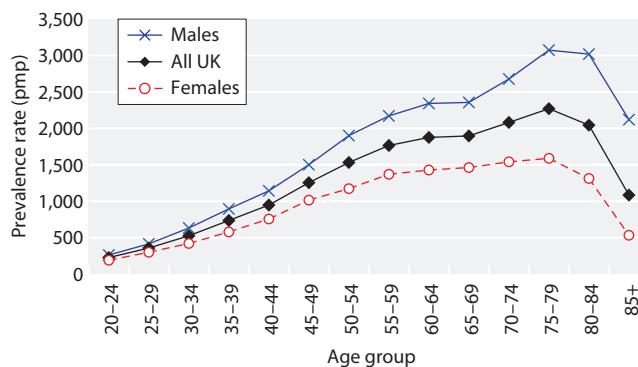


Fig. 2.5. Prevalence of RRT patients per million population by age and gender on 31/12/2015

Table 2.10. Ethnicity of prevalent RRT patients by centre on 31/12/2015

Centre	Percentage data not available	N with data	Percentage in each ethnic group*				
			White	Black	S Asian	Chinese	Other
England							
B Heart	0.0	657	60.3	8.4	30.1	0.5	0.8
B QEH	0.0	2,253	61.2	9.9	25.6	0.7	2.7
Basldn	0.4	274	85.8	6.6	5.5	1.1	1.1
Bradfd	0.7	577	54.8	2.1	42.3	0.5	0.3
Brightn	2.0	933	91.7	2.1	4.0	0.2	1.9
Bristol	1.1	1,461	89.9	4.8	3.5	0.3	1.5
Carlisle	0.0	281	98.2	0.4	1.4	0.0	0.0
Carsh	2.0	1,551	70.1	9.4	14.5	1.5	4.5
Chelms	7.4	264	90.2	4.9	1.9	1.5	1.5
Colchr	5.8	113	97.3	0.0	1.8	0.0	0.9
Covnt	0.0	958	79.2	4.7	15.3	0.7	0.0
Derby	0.4	535	81.5	3.2	12.9	0.4	2.1
Donc	0.0	301	94.4	1.3	2.3	0.3	1.7
Dorset	0.1	678	96.8	0.7	0.7	0.4	1.3
Dudley	0.0	312	84.3	3.5	9.9	0.6	1.6
Exeter	0.4	958	98.4	0.5	0.4	0.2	0.4
Glouc	0.2	442	94.6	2.3	2.5	0.0	0.7
Hull	1.5	845	96.6	0.4	2.0	0.4	0.7
Ipswi	3.2	394	81.7	2.3	1.5	0.3	14.2
Kent	0.2	1,040	94.5	0.7	2.8	0.4	1.6
L Barts	0.0	2,286	36.6	22.7	31.7	1.2	7.9
L Guys	1.3	1,984	62.1	24.7	7.7	1.1	4.4
L Kings	0.0	1,085	47.9	36.2	11.1	1.8	2.9
L Rfree	1.5	2,056	48.6	22.2	21.7	1.4	6.1
L St.G	3.9	813	45.9	23.0	22.6	2.3	6.2
L West	0.0	3,320	40.2	17.8	30.0	0.9	11.1
Leeds	0.3	1,520	80.0	4.9	13.5	0.7	0.9
Leic	3.2	2,115	74.4	4.0	19.2	0.7	1.7
Liv Ain	0.9	226	96.9	1.3	0.9	0.0	0.9
Liv Roy	1.8	1,269	92.7	2.0	1.7	1.3	2.2
M RI	1.6	1,863	75.9	8.8	12.7	0.8	1.9
Middlbr	0.0	893	94.0	0.3	5.2	0.4	0.1
Newc	0.0	1,010	92.5	1.2	4.7	0.9	0.8
Norwch	0.0	741	97.3	0.7	0.8	1.1	0.1
Nottm	0.2	1,112	85.6	5.5	6.7	0.4	1.8
Oxford	4.3	1,625	82.3	4.1	9.7	0.7	3.2
Plymth	0.0	505	97.2	0.4	0.4	0.4	1.6
Ports	3.9	1,605	93.5	1.2	3.6	0.0	1.7
Prestn	0.1	1,217	85.5	0.8	13.4	0.0	0.3
Redng	3.6	750	71.9	6.0	20.0	0.4	1.7
Salford	0.0	964	81.2	1.8	15.4	0.6	1.0
Sheff	0.5	1,318	89.7	2.4	4.9	0.8	2.1
Shrew	0.0	370	93.0	1.4	4.3	0.3	1.1
Stevng	3.0	802	72.6	9.1	16.6	0.5	1.2
Sthend	0.0	246	85.4	2.8	4.9	2.0	4.9
Stoke	0.5	785	93.4	1.1	3.7	0.1	1.7
Sund	0.4	457	96.3	0.4	2.8	0.4	0.0
Truro	0.0	417	98.6	0.2	0.2	0.2	0.7
Wirral	0.0	228	96.1	0.0	3.1	0.9	0.0
Wolve	0.2	580	69.1	9.5	20.3	0.9	0.2
York	1.8	480	97.3	0.6	1.5	0.2	0.4

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	239	99.2	0.4	0.4	0.0	0.0
Belfast	3.1	749	97.9	0.4	1.3	0.3	0.1
Newry	0.0	226	99.6	0.0	0.0	0.4	0.0
Ulster	0.0	170	95.9	1.8	1.2	1.2	0.0
West NI	0.0	293	99.0	0.3	0.3	0.3	0.0
Scotland							
Abrdn	63.2	196					
Airdrie	43.1	242	98.3	0.8	0.8	0.0	0.0
D & Gall	78.5	28					
Dundee	60.6	166					
Edinb	79.8	156					
Glasgw	81.3	320					
Inverns	37.5	158	98.1	0.0	1.3	0.0	0.6
Klmarnk	59.2	126					
Krkldy	77.3	67					
Wales							
Bangor	0.0	182	97.8	0.0	0.5	0.0	1.6
Cardff	0.7	1,601	92.8	1.1	4.7	0.7	0.7
Clwyd	0.0	185	97.3	0.5	2.2	0.0	0.0
Swanse	0.0	756	97.2	0.4	2.0	0.0	0.4
Wrexm	0.0	293	98.0	0.7	0.3	0.7	0.3
England	1.2	49,469	75.0	8.3	13.0	0.7	3.0
N Ireland	1.4	1,677	98.3	0.5	0.8	0.4	0.1
Scotland	69.9	1,459	95.8	1.0	1.9	0.4	0.8
Wales	0.4	3,017	95.0	0.8	3.2	0.4	0.6
UK	6.7	55,622	77.3	7.4	11.8	0.7	2.7

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

however, and only two years ago was 23.0%. Here, completeness of ethnicity data was highest in prevalent transplant patients (39.0%) which likely reflects improved data recording during the intensive work-up for transplantation.

In 2015, 22.7% of the prevalent UK RRT population (with ethnicity assigned) were from ethnic minorities (25.0% in England). The proportion of the prevalent UK RRT population (with ethnicity assigned) from ethnic minorities in Wales, Scotland and Northern Ireland was very small, although it should be noted that there was a high level of missing ethnicity data in Scotland as described above. The ONS estimates that approximately 14% of the UK general population is designated as belonging to an ethnic minority [1]. 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 to 22.7% in 2015 which may reflect 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 0.4% in Newry to 63.4% in London St Bartholomew's.

Primary renal diagnosis

Primary renal diagnosis (PRD) is associated with patient outcomes and as it could be used for case-mix adjustment, high levels of data completeness is important. Data for PRD were not complete for 2.6% of patients (table 2.11), but there exists a marked inter-centre difference in completeness of data returns. 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, 47% uncertain PRD); the UK and national totals have been appropriately adjusted.

Table 2.11. Primary renal diagnosis in prevalent RRT patients by age and gender on 31/12/2015

Primary diagnosis*	N	% all patients	Intercentre range %	Age <65		Age ≥65		M:F ratio
				N	%	N	%	
Aetiology uncertain	9,168	15.5	4.4–31.2	5,226	13.9	3,942	18.1	1.5
Glomerulonephritis	11,391	19.1	8.3–26.9	8,140	21.6	3,251	14.9	2.1
Pyelonephritis	6,289	10.6	5.2–18.6	4,593	12.2	1,696	7.8	1.1
Diabetes	9,913	16.7	8.9–27.7	5,830	15.5	4,083	18.7	1.6
Polycystic kidney	5,980	10.0	4.0–16.4	3,856	10.2	2,124	9.7	1.1
Hypertension	3,707	6.2	1.7–17.2	2,001	5.3	1,706	7.8	2.4
Renal vascular disease	1,760	3.0	0.5–9.7	376	1.0	1,384	6.3	2.0
Other	9,758	16.4	11.2–30.5	6,818	18.1	2,940	13.5	1.3
Not sent	1,542	2.6	0.0–24.3	864	2.3	678	3.1	1.6

*See appendix H: ERA-EDTA coding

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

The percentage of patients with uncertain aetiology for the remaining 69 centres providing individual-level data ranged between 4.4% and 31.2%, which is comparable to recent years. No centre had >30% missing data in 2015 and overall rates of incomplete data are improving.

As observed in previous years, glomerulonephritis (GN) was the most common primary renal diagnosis in the 2015 prevalent cohort at 19.1% (table 2.11). Diabetic nephropathy accounted for 16.7% of renal disease in prevalent patients on RRT, although it was more common in the 65 and over year age group compared to the younger group (18.7% vs 15.5%). This contrasted with incident patients where diabetic nephropathy was the predominant diagnostic code in 27.5% of new RRT patients. The frequency of individual primary renal diagnoses varied with age; patients aged under 65 years and younger were more likely to have GN (21.5%) or diabetes (15.5%) and less likely to have renal vascular disease (1.0%) as the cause of their renal failure. This contrasts with older patients (≥65 years) among whom 6.3% have renal vascular disease as the cause of their renal failure. Uncertain aetiology was a more common cause in this age group than amongst younger patients (18.1% compared with 13.9% amongst patients <65 years).

As described in previous years, the male:female ratio was greater than 1:1 for all primary renal diagnoses (table 2.11). The biggest differences between males and females were for GN (male:female ratio of 2.1), hypertension (2.4) and renal vascular disease (2.0).

Trends in the transplant:dialysis ratio by primary diagnosis differed markedly between older and younger patients. In individuals aged less than 65 years, the renal transplantation to dialysis ratio was greater than 1 in all PRD groups except diabetic nephropathy and

renal vascular 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).

Diabetes

Throughout this section the term ‘diabetic nephropathy’ is used to denote patients in whom diabetes mellitus is considered to be the primary cause of the kidney disease rather than merely an associated comorbidity. It includes all prevalent patients with type 1 or type 2 diabetes as the primary renal diagnosis (ERA-EDTA coding). 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 number of prevalent patients with diabetic nephropathy has increased steadily over the last number

Table 2.12. Transplant:dialysis ratios by age and primary renal disease in the prevalent RRT population on 31/12/2015

Primary diagnosis*	Transplant:dialysis ratio	
	<65	≥65
Aetiology uncertain	2.1	0.4
Glomerulonephritis	2.4	0.9
Pyelonephritis	2.9	0.6
Diabetes	0.9	0.2
Polycystic kidney	3.1	1.8
Hypertension	1.4	0.4
Renal vascular disease	0.9	0.1
Other	2.1	0.4
Not sent	0.8	0.1

*appendix H ERA-EDTA coding

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

Table 2.13. Age relationships in patients with diabetes and patients without diabetes and modality in prevalent RRT patients on 31/12/2015

	Patients with diabetes ^a	Patients without diabetes ^b
N	9,913	48,054
M:F ratio	1.63	1.54
Median age on 31/12/15	62	58
Median age at start of RRT ^{c,d}	56	48
Median years on RRT ^d	3.6	7.3
% HD	58	37
% PD	8	5
% transplant	34	58

Excluded centre: $\geq 40\%$ 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

of years and grew by 4.8% to 9,913 in 2015, from 9,456 in 2014, representing 17.1% of all prevalent patients (compared with 13.5% in 2006) (table 2.13). The male:female ratio for diabetic nephropathy was 1.6. The median age at start of RRT for patients with diabetic nephropathy (56 years) was eight years higher than those with other PRDs (48 years), although the median age at the end of 2015 for prevalent patients with diabetic nephropathy was only four years higher than for individuals without diabetic nephropathy. This reflects reduced survival for patients with diabetes compared with patients without diabetes on RRT. This is also supported by the lower median time on RRT for patients with diabetic nephropathy (3.6 years vs 7.3 years for those without diabetic nephropathy) and this difference in survival has not changed over the last five years (3.4 years vs 6.5 years in 2010). The age at starting RRT in those with diabetic nephropathy was four years younger in Scotland compared with the UK average (data not shown).

There were large differences in the distribution of treatment modalities in those with diabetic nephropathy compared with those without. Fifty eight percent of patients with diabetic nephropathy were undergoing HD compared with just 37% of patients with any other primary renal diagnosis (table 2.13). The percentage of patients with a functioning transplant was much lower

Table 2.14. Treatment modalities by age and diabetes status on 31/12/2015

	<65		≥ 65	
	Diabetes ^a	All other causes ^b	Diabetes ^a	All other causes ^b
N	5,830	31,011	4,083	17,043
% HD	44.7	25.8	77.7	56.0
% PD	7.3	4.3	8.3	7.6
% transplant	48.1	69.9	14.0	36.4

Excluded centre: $\geq 40\%$ PRD aetiology uncertain (Colchr)

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

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

in prevalent patients with diabetic nephropathy than in prevalent patients without (34% vs 58%). However, the proportion of patients with diabetic nephropathy with a functioning transplant has increased since 2005 when only 26.9% of patients with diabetic nephropathy had a functioning transplant. For older patients with diabetic nephropathy (age ≥ 65 years), only 14.0% had a functioning transplant compared with 48.1% of their peers with other primary diagnoses (table 2.14). In the UK, 34.0% of prevalent patients with diabetic nephropathy had a functioning transplant compared with the UK average of 58.0% amongst those with other primary diagnoses. Amongst those patients receiving dialysis, a higher proportion of prevalent patients without diabetic nephropathy (18.0%) were on home dialysis therapies (home HD and PD) compared with prevalent patients with diabetic nephropathy (13.8%).

Modalities of treatment

Transplantation was the most common treatment modality (53.1%) for prevalent RRT patients in 2015, followed closely by centre-based HD (39.0%) in either hospital centre (17.8%) or satellite unit (21.2%) (figure 2.6). Satellite HD was again more prevalent than in-centre HD, a trend first noted in 2012. Home therapies made up the remaining 7.9% of treatment therapies, largely PD in its different formats (5.9%) which followed a similar pattern since 2012. The proportion on continuous ambulatory peritoneal dialysis (CAPD) and automated PD (APD) was 2.5% and 3.4% respectively, although the proportion on APD may be an underestimate due to centre level coding issues which meant the UKRR could not always distinguish between these therapies.

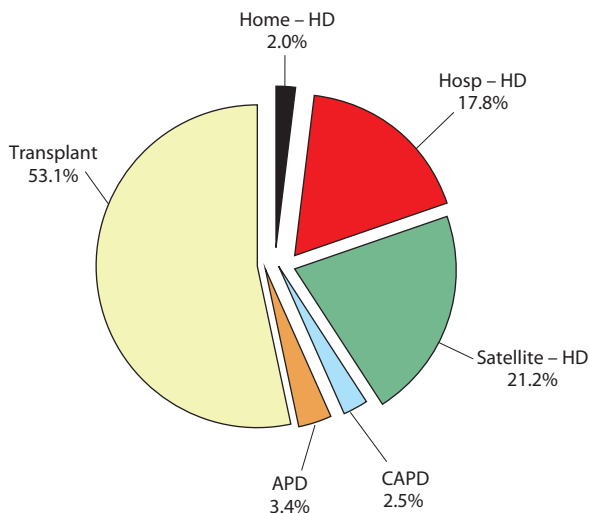


Fig. 2.6. Treatment modality in prevalent RRT patients on 31/12/2015

As described earlier, treatment modality was related to patient age. Younger patients (age <65 years), were more likely to have a functioning transplant (65.8%) when compared with patients aged 65 and over (31.3%) (table 2.15). HD was the principal modality in the older patient group (60.9%).

Figure 2.7 shows the distribution of RRT modalities by age group. From the age of 45 years onwards, transplant prevalence declined as HD prevalence increased. The proportion of each age group treated by PD remained relatively stable.

As the HD prevalence varied by age group, the proportion of prevalent dialysis patients receiving HD varied between centres ranging from 68.1% in Carlisle to 100% in Colchester (table 2.16).

Of the dialysis population, 45.2% received their treatment at a satellite haemodialysis unit in 2015. This figure remains comparable to recent years, but represents an increase from 39.9% in 2010. In 2015, the number of centres that had more than 50% of their haemodialysis activity taking place in satellite units was 27 (figure 2.8). Although there are satellite units in Scotland, the data provided for 2015 did not distinguish between main centre and satellite unit haemodialysis. As such, it is difficult to accurately assess access to satellite haemodialysis across the UK as a whole, so the statistics pool only England, Wales and Northern Ireland data.

There was also wide variation between centres in the proportion of dialysis patients being managed with APD, ranging from 0.0% to 24.2% (table 2.16). While

Table 2.15. Percentage of prevalent RRT patients by dialysis and transplant modality by UK country on 31/12/2015

UK country	<65 years				≥65 years			
	N	% HD	% PD	% transplant	N	% HD	% PD	% transplant
England	31,541	29.8	4.9	65.2	18,505	61.0	8.0	31.0
N Ireland	1,068	21.2	3.6	75.3	633	62.7	7.3	30.0
Scotland	3,293	28.6	4.1	67.3	1,560	62.8	5.6	31.6
Wales	1,834	25.5	6.2	68.3	1,195	56.4	8.4	35.2
UK	37,736	29.3	4.9	65.8	21,893	60.9	7.8	31.3

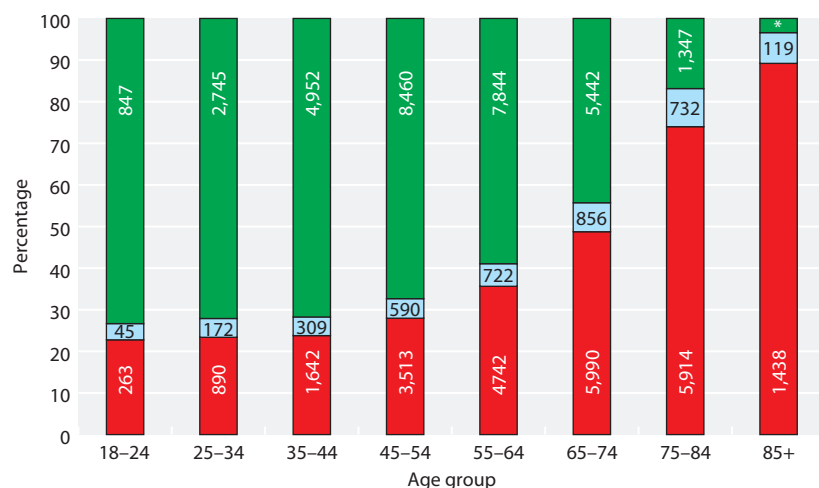


Fig. 2.7. Treatment modality distribution by age in prevalent RRT patients on 31/12/2015
*N = 55

Table 2.16. Percentage of prevalent dialysis patients by dialysis modality and centre on 31/12/2015

Centre	N	% haemodialysis					% peritoneal dialysis	
		Total	Home	Geo-HDD ^c	Hospital	Satellite	CAPD	APD
England								
B Heart	471	89.2	2.8	2.7	80.5	5.9	4.7	6.2
B QEH	1,149	87.6	4.4	3.7	12.1	71.2	4.1	8.3
Basldn	198	82.3	0.5	1.0	64.7	17.2	7.6	10.1
Bradfd	251	92.8	2.8	3.5	74.5	15.5	2.8	4.4
Brightn	501	86.6	9.0	9.5	35.5	42.1	9.6	3.8
Bristol	582	90.2	3.8	2.9	17.9	68.6	5.0	4.8
Carlis	119	68.1	0.0	0.0	47.9	20.2	12.6	17.7
Carsh	930	87.9	3.1	3.5	19.1	65.6	2.6	9.6
Chelms	171	84.2	0.0	0.6	84.2	0.0	8.8	7.0
Colchr	120	100.0	0.0	0.0	100.0	0.0	0.0	0.0
Covnt	440	80.5	3.6	3.4	76.8	0.0	19.1	0.2
Derby	324	75.9	11.7	10.7	64.2	0.0	16.4	7.7
Donc	204	88.7	4.9	7.1	44.6	39.2	1.0	10.3
Dorset	332	87.1	2.1	3.3	19.3	65.7	3.6	8.7
Dudley	229	75.1	5.7	8.0	43.7	25.8	15.7	8.7
Exeter	516	84.3	1.0	1.0	10.3	73.1	5.8	9.9
Glouc	265	86.0	1.9	3.0	64.5	19.6	3.4	10.6
Hull	434	82.5	1.8	2.5	41.5	39.2	10.6	6.9
Ipswi	181	79.0	0.0	0.0	68.5	10.5	8.8	12.2
Kent	484	87.6	3.3	3.9	25.4	58.9	10.3	2.1
L Barts	1,214	83.0	1.9	1.7	35.3	45.8	1.8	15.2
L Guys	709	95.4	6.9	3.4	11.9	76.6	2.0	2.7
L Kings	656	86.3	1.8	3.0	16.9	67.5	5.8	7.9
L Rfree	867	82.2	2.4	2.8	2.2	77.6	6.5	11.3
L St.G	388	87.4	1.0	1.8	36.6	49.7	4.1	7.0
L West	1,516	95.3	1.2	1.2	20.6	73.6	2.6	2.1
Leeds	570	89.8	4.0	3.6	15.6	70.2	1.6	8.6
Leic	1,025	89.5	5.9	5.6	17.7	66.0	3.1	7.4
Liv Ain	213	82.2	4.7	7.4	10.3	67.1	1.9	16.0
Liv Roy	451	85.1	8.2	6.7	34.6	42.4	6.9	8.0
M RI	591	89.0	8.5	7.6	27.6	53.0	4.4	6.6
Middlbr	375	94.1	4.0	4.2	25.9	64.3	5.9	0.0
Newc	361	87.3	6.7	6.1	74.8	5.8	1.9	10.8
Norwch	376	89.9	6.7	6.6	51.1	32.2	9.8	0.3
Nottm	470	82.6	6.2	7.0	38.1	38.3	7.0	10.4
Oxford	533	82.4	3.6	2.9	30.2	48.6	3.9	13.7
Plymth	172	79.7	4.1	4.2	66.3	9.3	8.1	12.2
Ports	739	90.3	7.6	7.2	18.9	63.7	9.7	0.0
Prestn	626	91.5	6.4	6.5	20.5	64.7	1.6	6.9
Redng	368	82.1	1.4	2.6	38.9	41.9	13.0	4.6
Salford	483	82.4	3.1	4.1	24.2	55.1	6.2	11.4
Sheff	601	90.2	7.2	6.6	36.6	46.4	9.8	0.0
Shrew	235	86.4	9.8	11.5	42.1	34.5	5.5	8.1
Stevng	525	97.0	4.4	4.4	26.3	66.3	2.9	0.0
Sthend	143	88.1	1.4	2.1	86.7	0.0	11.9	0.0
Stoke	409	81.7	8.1	7.2	48.9	24.7	2.4	10.0
Sund	239	92.5	0.8	1.3	68.2	23.4	4.2	3.4
Truro	183	88.0	5.5	5.5	39.9	42.6	5.5	6.6
Wirral	206	90.8	5.8	6.3	37.9	47.1	1.5	7.8
Wolve	397	80.1	5.8	6.9	43.8	30.5	7.3	11.1
York	189	84.7	5.8	5.4	32.8	46.0	4.8	10.6

Table 2.16. Continued

Centre	N	% haemodialysis					% peritoneal dialysis	
		Total	Home	Geo-HDD ^c	Hospital	Satellite	CAPD	APD
N Ireland								
Antrim	142	85.9	1.4	2.8	84.5	0.0	0.7	13.4
Belfast	207	88.4	4.4	2.9	84.1	0.0	1.0	10.6
Newry	110	80.0	2.7	2.9	77.3	0.0	0.9	19.1
Ulster	113	94.7	1.8	2.6	92.9	0.0	0.0	5.3
West NI	135	91.1	3.0	2.9	88.2	0.0	0.0	8.2
Scotland								
Abrdn	244	89.4	2.1	2.0	87.3	0.0	6.6	4.1
Airdrie	211	92.4	0.0	1.4	92.4	0.0	2.4	5.2
D & Gall	65	83.1	4.6	4.7	78.5	0.0	13.9	3.1
Dundee	204	91.7	1.0	1.0	90.7	0.0	5.9	2.5
Edinb	311	91.3	1.9	2.2	89.4	0.0	2.6	6.1
Glasgw	660	91.7	3.9	3.4	87.7	0.0	1.8	6.5
Inverns	106	87.7	2.8	3.7	84.9	0.0	6.6	5.7
Klmarnk	173	78.6	5.8	5.2	72.8	0.0	1.2	20.2
Krkldy	170	88.2	0.0	0.0	88.2	0.0	1.2	10.6
Wales								
Bangor	99	84.9	15.2	17.1	51.5	18.2	7.1	8.1
Cardff	576	86.3	4.9	4.7	12.7	68.8	9.7	4.0
Clwyd	104	80.8	6.7	4.0	74.0	0.0	4.8	14.4
Swanse	427	85.5	8.4	8.5	44.3	32.8	7.7	6.8
Wrexm	149	75.2	3.4	2.8	58.4	13.4	0.7	24.2
England	23,731	87.3	4.3		32.2	50.8	5.6	7.0
N Ireland^a	707	88.1	2.8		85.3	0.0	0.6	11.2
Scotland^b	2,144	89.7	2.6		87.1	0.0	3.4	7.0
Wales	1,355	84.3	6.7		35.2	42.4	7.5	8.2
UK	27,937	87.3	4.2		37.9	45.2	5.4	7.2

^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

^cGeo-HHD: home haemodialysis presented by the centre closest to the patient's home postcode rather than the centre returning the data to the UKRR

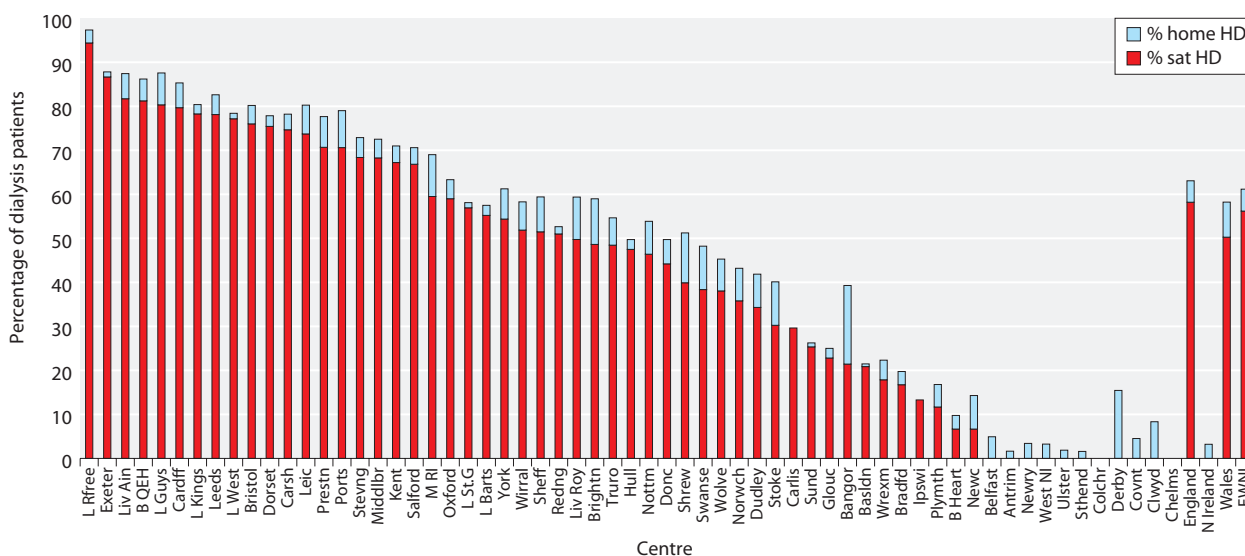


Fig. 2.8. Percentage of prevalent haemodialysis patients treated with satellite or home haemodialysis by centre on 31/12/2015

*Scottish centres excluded as information on satellite HD was not available. No centres in Northern Ireland have satellite dialysis units

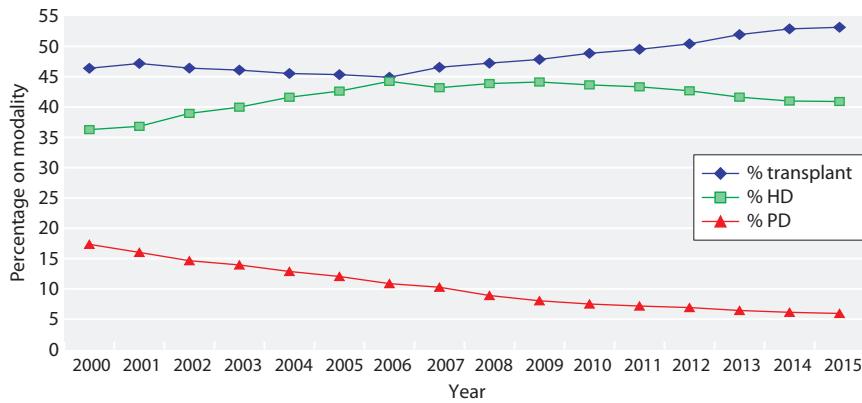


Fig. 2.9. Modality changes in prevalent RRT patients from 2000–2015

in Northern Ireland nearly all PD patients were on APD, across the UK six of the 69 centres with a PD programme did not report having any patients on APD.

Home haemodialysis

In 2015, the percentage of dialysis patients receiving home HD varied from 0% in six centres, to greater than 5% in 23 centres (table 2.16). In the UK, the overall percentage of dialysis patients receiving home haemodialysis has increased from 2.9% in 2010 to 4.2% in 2015.

The proportion of dialysis patients receiving home haemodialysis was greatest in Wales at 6.7%, compared with 2.8% in Northern Ireland, 4.3% in England and 2.6% in Scotland (figure 2.8, table 2.16). By comparison, in 2007, the proportion of patients receiving home haemodialysis was 2% in each of the four UK countries. More recently, thirty-five renal centres across the UK had an increase in the proportion of individuals on home haemodialysis compared with 2014.

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, the proportion of patients on home HD was measured by centre, by assigning the patients to a given centre based on the patient postcode, rather than to the centre that returned the 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 (Doncaster, Dorset, Dudley, Gloucester, London Kings, Liverpool Aintree, Reading, Shrewsbury, Wolverhampton, Antrim, Airdrie and Bangor).

Change in modality

The relative proportion of RRT modalities in prevalent patients has changed dramatically over the past 16 years. The main features are depicted in figure 2.9, which

describes a year on year decline in the proportion of patients treated by PD since 2000 and a drop of 6.1% over the last 10 years. The absolute number of patients on PD decreased from 4,471 patients in 2005 to 3,545 patients in 2015. Time on PD has decreased over the last six years, from a median of 2.0 years in 2007 to 1.6 years in 2015 probably reflecting increased transplantation rates in this largely younger patient group and reducing technique survival rates. The percentage of patients undergoing PD for more than seven years was only 8.6%.

The proportion of all RRT patients being treated with HD has fallen slightly since 2009 from 44.1% to 40.9% though this still represents an increase in absolute numbers on HD (from 21,671 to 25,024) as well as an increase in HD prevalence (from 354 to 384 pmp).

The proportion of patients with a functioning transplant has been increasing since 2007 (46.5%) to 53.1% in 2015. This probably reflects both an increasing number of incident transplants (2,218 adults and children in 2007 [2] to 3,174 in 2015) as well as increasing survival of prevalent transplant patients.

Figure 2.10 depicts in more detail the modality changes in the prevalent dialysis population during this time. The data show a clear reduction in patients treated by CAPD over time and an increase in satellite HD coupled with a reduction in hospital HD.

International comparisons

There are marked differences in RRT prevalence between countries (figure 2.11). RRT prevalence in Northern European countries (including the UK), Australia and New Zealand was lower than in Southern Europe which was lower than the USA and Canada.

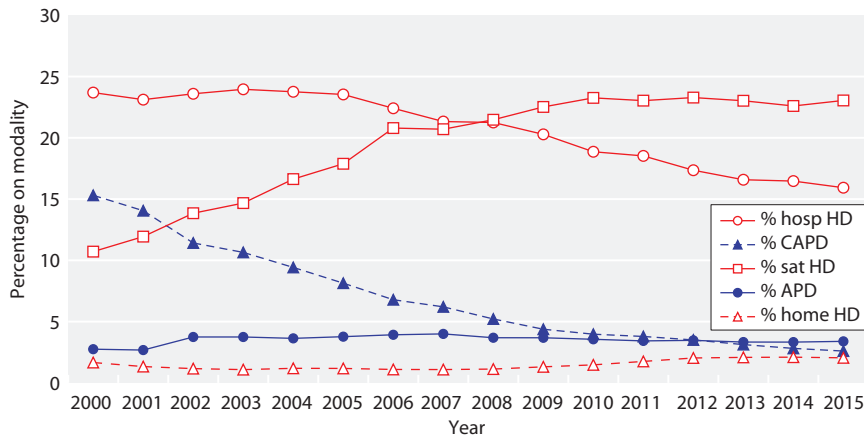


Fig. 2.10. Detailed dialysis modality changes in prevalent RRT patients from 2000–2015
*Scottish centres excluded as information on satellite HD was not available

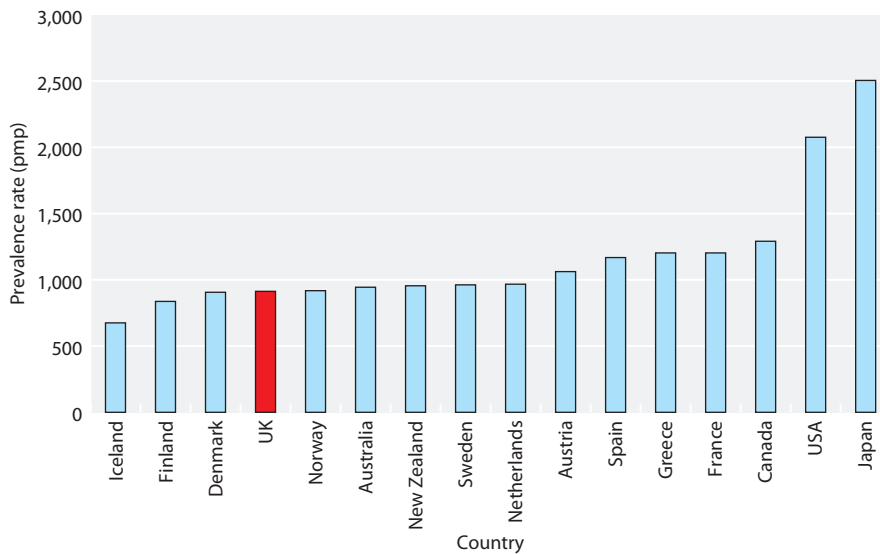


Fig. 2.11. RRT Prevalence (pmp) by country in 2014

Non-UK data fromUSRDS available at https://www.usrds.org/2016/view/v2_13.aspx
The UK data include paediatric patients to correspond with the data from the other countries.

All rates unadjusted. Japan is dialysis only. Data for France include 22 regions. Data for Spain include 18 of 19 regions. Data for Canada excludes Quebec.

Identifying the source of these differences is complicated by differences in healthcare systems, patient registry coverage and definitions (for example, data from Japan only includes dialysis), approaches to conservative care and incidence rates in these countries.

Discussion

The proportion of adults undergoing RRT continued to grow across all countries in the UK and there was an increase of 4% on 2014 in the UK as a whole.

Whilst half of all patients on RRT continued to be aged 40–64 years, the prevalent population is becoming more elderly with 16% of patients being over 75 years compared to 15.1% in 2010. This is most noticeable in transplant patients where 31% of over 65 year old patients

had a working transplant in 2015 compared to 23.7% in 2010.

The proportion of patients using peritoneal dialysis has been falling since the early 1990s and was just 6% in 2015.

There were large variations in RRT prevalence between CCG/HB across the UK. This variation will largely be determined by the number of patients needing RRT but also by the clinical care delivered by renal centres. Many factors unrelated to clinical care will also have contributed to these differences such as geography, local population density, age distribution, ethnic composition, prevalence of diseases predisposing to kidney disease and the social deprivation index of that population. Comparisons with previous years was hindered somewhat by changes in the lower super output areas (LSOAs) ‘covered’ by each CCG as well as the combining of CCGs (in 2015 Gateshead CCG, Newcastle North and East CCG and Newcastle West CCG merged).

The percentage of CCG/HB areas with prevalence ratios as expected for the age and gender distribution of each area has increased over the last five years with fewer areas having higher than expected ratios. The reorganisations seen in healthcare areas over this same time period make interpretation of this finding more difficult. There remained large variations in the numbers of patients receiving RRT in each health area in the UK and the effects of centralising specialist commissioning arrangements in England on this variation will be seen in subsequent years.

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- 2 Webb, L., et al., UK Renal Registry 13th Annual Report: Chapter 3 Demographic and biochemistry profile of kidney transplant recipients in the UK in 2009: national and centre-specific analyses. *Nephron Clin Pract.* 2011; 119 (suppl 2): c53–84. doi: 10.1159/000331745

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Conflicts of interest: the authors declare no conflicts of interest

