

UK Renal Registry 18th Annual Report: Chapter 2 UK Renal Replacement Therapy Prevalence in 2014: 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 58,968 adult patients receiving renal replacement therapy (RRT) in the UK on 31st December 2014, an absolute increase of 4.0% from 2013.
- The actual number of patients increased 2.0% for haemodialysis (HD), 5.3% for those with a functioning transplant but decreased 0.7% for peritoneal dialysis (PD).
- The UK adult prevalence of RRT was 913 per million population (pmp). The reported prevalence in 2000 was 523 pmp.
- The number of patients receiving home HD increased by 6.7% from 1,113 patients in 2013 to 1,188 patients in 2014.

- The median age of prevalent patients was 59 years (HD 67 years, PD 64 years, transplant 53 years). In 2000, the median age was 55 years (HD 63 years, PD 58 years, transplant 48 years). In 2014, the percentage of RRT patients aged greater than 75 years was 16.0%.
- For all ages, the prevalence rate in men exceeded that in women, peaking in age group 75–79 years at 3,100 pmp in men and for women at 1,600 pmp in age group 70–74 years.
- The most common identifiable renal diagnosis was glomerulonephritis (19%), followed by diabetes (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.
- Prevalence rates in patients aged ≥ 85 years continued to increase between 2013 and 2014 (1,021 per million age related population (pmp) to 1,060 pmp).

Introduction

This chapter presents data on all adult patients on RRT in the UK at the end of 2014. The UK Renal Registry (UKRR) received data returns for 2014 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 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 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 (see appendix B: Definitions and Analysis Criteria 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 sent through. Queries and updated information are welcomed by the UKRR at any point during the year if this occurs.

Prevalent patients on RRT in 2014 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 number of patients in each renal centre located in the country. As some centres treat patients across national boundaries, these numbers differ marginally from those quoted elsewhere in this report when patients are allocated to geographical areas by their individual postcodes.

There were 58,968 adult patients receiving RRT in the UK at the end of 2014, giving an adult UK population

Table 2.1 Prevalence of adult RRT in the UK on 31/12/2014

	England	N Ireland	Scotland ^b	Wales	UK
Number of prevalent patients	49,842	1,608	4,676	2,842	58,968
Total estimated population, mid-2014 (millions) ^a	54.3	1.8	5.3	3.1	64.6
Prevalence rate HD (pmp)	379	344	346	361	374
Prevalence rate PD (pmp)	58	34	40	62	56
Prevalence rate dialysis (pmp)	437	378	386	423	430
Prevalence rate transplant (pmp)	481	496	488	496	482
Prevalence rate total (pmp)	918	874	874	919	913
95% confidence intervals total (pmp)	910–926	831–916	849–899	885–953	905–920

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

^bThe RRT prevalent number published in the Scottish Renal Registry report for the same period is slightly higher. This is explained at least in part by the inclusion of under 18s in the Scottish Renal Registry analyses

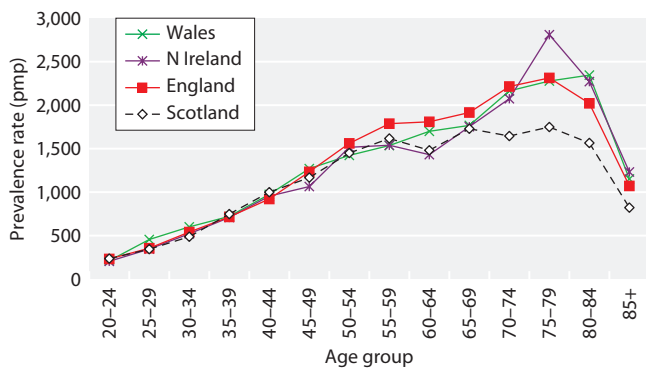


Fig. 2.1. Prevalence rates per million population by age group and UK country on 31/12/2014

prevalence of 913 pmp (table 2.1) compared with 888 pmp in 2013. Prevalence rates increased in all of the UK countries in 2014. While the prevalent dialysis rate increased slightly in the UK to 430 pmp in 2014 compared with 427 pmp in 2013, there was a small decrease in PD prevalence. A decline in PD prevalence in the UK has been noted since 1997 and, after a brief plateau in 2011 and 2012, there was further decline to 57 pmp in 2013 and then 56 pmp in 2014. Conversely, the UK prevalence of transplanted patients continued to increase from 462 pmp in 2013 to 482 pmp in 2014. In analyses stratified by country and age group, Northern Ireland exhibited a higher RRT prevalence rate for patients aged 75–79 years 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 1,922 per million age related population (pmp) in 2013 to 2,006 pmp in 2014 and in patients aged ≥ 85 years from 1,021 pmp in 2013 to 1,060 pmp in 2014. This 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 4.0% between 2013 and 2014 (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 in England and Northern Ireland were similar at 4.1% and 4.3% respectively. For Northern Ireland, this represented a larger one-year increase than that experienced between 2012 and 2013 (2.0%). Scotland and Wales also

experienced greater changes in prevalence since 2013 (3.1% and 2.3% respectively) as compared with 2012–2013 (1.5% change in Scotland and 1.7% change in Wales). The changes reported here between 2012 and 2013 will differ from those presented in the 17th Annual Report as the current report includes data updates made subsequent to publication of the 17th Annual Report.

After a slight reduction in prevalent HD patients between 2012 and 2013 (0.1% pmp decrease), the number of prevalent HD patients increased by 1.3% in 2014 compared to 2013 (table 2.4). There continued to be an increase in prevalent transplant patients (4.5% pmp) and, as seen in previous years, there was a decrease in prevalent PD patients (1.5% pmp decrease). Notably, the decline observed between 2013 and 2014 was smaller than that observed between 2012 and 2013 (4.6% pmp decrease).

The average annual change in prevalent patients between 2010 and 2014 was a 1.0% pmp increase in HD, 2.3% pmp fall in PD, and 5.0% pmp growth in prevalent transplant patients (table 2.4). In the same period there was an average annual 15.8% pmp growth in the use of home haemodialysis (data not shown).

The long-term (1997–2014) UK prevalence pattern by treatment modality is shown in figure 2.2. The steady growth in transplant numbers was maintained in 2014. The increase in home haemodialysis patient numbers has been associated with just over a doubling in the prevalence rate, from 2.0% of the dialysis population in 2005 ($n = 450$) to 4.3% in 2014 ($n = 1,188$). In contrast PD has fallen by 5.9% between 2005 and 2014.

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).

There were substantial variations in the crude CCG/HB prevalence rates pmp, from 560 pmp (Shetland, population 23,200) to 1,680 pmp (NHS Brent, population 317,300). There were similar variations in the standardised prevalence ratios (ratio of observed:expected prevalence rate given the age/gender breakdown of

Table 2.2 Number of prevalent RRT patients by treatment modality and centre on 31/12/2014

Centre	N					Catchment populations (millions)	2014 crude rate pmp	(95% CI)
	HD	PD	Dialysis	Transplant	RRT			
England								
B Heart	415	34	449	189	638	0.74	864	(797-932)
B QEH ^a	952	143	1,095	1,042	2,137	1.70	1,258	(1,204-1,311)
Basldn	174	28	202	78	280	0.42	675	(596-754)
Bradfd	223	21	244	305	549	0.65	842	(772-912)
Brightn	430	65	495	421	916	1.30	706	(661-752)
Bristol ^a	531	67	598	862	1,460	1.44	1,014	(962-1,066)
Camb ^a	367	31	398	845	1,243	1.16	1,073	(1,014-1,133)
Carlis	74	28	102	148	250	0.32	779	(683-876)
Carsh	793	136	929	636	1,565	1.91	818	(778-859)
Chelms	135	27	162	101	263	0.51	515	(453-578)
Colchr	119	0	119	0	119	0.30	398	(326-469)
Covnt ^a	367	91	458	504	962	0.89	1,078	(1,010-1,147)
Derby	240	86	326	193	519	0.70	739	(675-802)
Donc	183	27	210	75	285	0.41	695	(614-776)
Dorset	278	51	329	336	665	0.86	772	(713-830)
Dudley	176	54	230	75	305	0.44	690	(613-768)
Exeter	416	94	510	440	950	1.09	872	(817-928)
Glouc	211	43	254	175	429	0.59	731	(661-800)
Hull	330	77	407	397	804	1.02	788	(733-842)
Ipswi	127	31	158	211	369	0.40	925	(831-1,019)
Kent	409	66	475	544	1,019	1.22	832	(781-883)
L Barts ^a	964	231	1,195	1,041	2,236	1.83	1,222	(1,171-1,272)
L Guys ^a	654	30	684	1,240	1,924	1.08	1,778	(1,698-1,857)
L Kings	541	91	632	393	1,025	1.17	875	(821-929)
L Rfree ^a	712	143	855	1,155	2,010	1.52	1,324	(1,266-1,382)
L St.G ^a	308	49	357	440	797	0.80	999	(930-1,068)
L West ^a	1,416	64	1,480	1,764	3,244	2.40	1,352	(1,306-1,399)
Leeds ^a	521	63	584	916	1,500	1.67	898	(853-943)
Leic ^a	907	121	1,028	1,123	2,151	2.44	883	(846-920)
Liv Ain	162	41	203	15	218	0.48	450	(391-510)
Liv Roy ^a	370	60	430	882	1,312	1.00	1,312	(1,241-1,383)
M RI ^a	519	78	597	1,218	1,815	1.53	1,185	(1,131-1,240)
Middlbr	338	15	353	505	858	1.00	854	(797-912)
Newc ^a	287	52	339	644	983	1.12	877	(822-932)
Norwch	326	35	361	330	691	0.79	878	(813-944)
Nottm ^a	365	84	449	617	1,066	1.09	980	(921-1,039)
Oxford ^a	464	82	546	1,112	1,658	1.69	981	(934-1,028)
Plymth ^a	137	38	175	335	510	0.47	1,086	(991-1,180)
Ports ^a	617	79	696	899	1,595	2.02	788	(749-827)
Prestn	565	58	623	548	1,171	1.49	784	(739-829)
Redng	294	73	367	396	763	0.91	838	(779-898)
Salford	411	88	499	470	969	1.49	650	(609-691)
Sheff ^a	581	62	643	717	1,360	1.37	992	(939-1,044)
Shrew	193	32	225	124	349	0.50	697	(624-770)
Stevng	488	27	515	267	782	1.20	650	(604-695)
Sthend	116	20	136	102	238	0.32	751	(656-847)
Stoke	337	83	420	356	776	0.89	872	(811-934)
Sund	211	18	229	223	452	0.62	731	(664-798)
Truro	149	21	170	210	380	0.41	920	(827-1,012)
Wirral	205	23	228	18	246	0.57	430	(376-484)
Wolve	314	79	393	182	575	0.67	860	(790-930)
York	143	29	172	289	461	0.49	937	(851-1,022)

Table 2.2 Continued

Centre	N					Catchment populations (millions)	2014 crude rate pmp	(95% CI)
	HD	PD	Dialysis	Transplant	RRT			
N Ireland								
Antrim	123	13	136	93	229	0.29	777	(676–878)
Belfast ^a	204	15	219	531	750	0.64	1,178	(1,093–1,262)
Newry	92	16	108	100	208	0.26	796	(688–904)
Ulster	99	4	103	46	149	0.27	560	(470–650)
West NI	116	14	130	142	272	0.35	773	(681–865)
Scotland								
Abrdn	212	28	240	275	515	0.60	858	(784–933)
Airdrie	185	9	194	205	399	0.55	723	(652–794)
D & Gall	49	17	66	67	133	0.15	896	(744–1,048)
Dundee	178	24	202	212	414	0.46	894	(808–980)
Edinb ^a	278	23	301	457	758	0.96	786	(730–842)
Glasgw ^a	592	43	635	1,006	1,641	1.62	1,011	(962–1,059)
Inverns	71	16	87	140	227	0.27	841	(731–950)
Klmarnk	141	37	178	128	306	0.36	847	(752–942)
Krkldy	146	17	163	120	283	0.32	894	(789–998)
Wales								
Bangor ^b	83	16	99	0	99	0.22	454	(364–543)
Cardff ^a	495	81	576	1,017	1,593	1.42	1,122	(1,067–1,177)
Clwyd	91	12	103	62	165	0.19	870	(737–1,003)
Swanse	333	54	387	317	704	0.89	795	(736–854)
Wrexm	113	30	143	138	281	0.24	1,170	(1,033–1,306)
England	20,565	3,169	23,734	26,108	49,842			
N Ireland	634	62	696	912	1,608			
Scotland	1,852	214	2,066	2,610	4,676			
Wales	1,115	193	1,308	1,534	2,842			
UK	24,166	3,638	27,804	31,164	58,968			

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 across national boundaries

^aTransplant centre

^bBangor shares the care of its transplant patients with Liverpool Royal. Previously these patients were all reported by Liverpool Royal. For 2014 data, a small number of these patients were reported by Bangor and, in tables 2.1–2.3 only, these patients have been re-allocated to Liverpool Royal

the CCG/HB) from 0.58 (Shetland) to 2.15 (Brent) (table 2.5). Confidence intervals are not presented for the crude rates per million population for 2014 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 2014, there were 75 CCGs/HBs with a significantly low standardised prevalence ratio (SPR), 113 with a 'normal' SPR and 49 with a significantly high SPR

(table 2.5). 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. For example, the association with the level of ethnic diversity is illustrated by the fact that mean SPRs were significantly higher in the 90 CCGs/HBs with an ethnic minority population greater than 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 2014, for each 10% increase in ethnic minority population, the standardised prevalence ratio increased by 0.17 (equates to ~17%). The relationship between the ethnic composition of a CCG/HB and its SPR is demonstrated in figure 2.3.

Table 2.3 Number of prevalent patients on RRT by centre at year end 2010–2014

Centre	Date					% change 2013–2014	% annual change 2010–2014
	31/12/2010	31/12/2011	31/12/2012	31/12/2013	31/12/2014		
England							
B Heart	635	665	668	655	638	−2.6	0.1
B QEH	1,826	1,909	1,969	2,044	2,137	4.5	4.0
Basldn	209	231	258	270	280	3.7	7.6
Bradfd	453	466	504	520	549	5.6	4.9
Brightn	764	777	829	871	916	5.2	4.6
Bristol	1,264	1,317	1,337	1,423	1,460	2.6	3.7
Camb	1,004	1,075	1,111	1,191	1,243	4.4	5.5
Carlis	206	215	216	227	250	10.1	5.0
Carsh	1,330	1,368	1,454	1,480	1,565	5.7	4.2
Chelms	237	217	225	240	263	9.6	2.6
Colchr	115	119	117	115	119	3.5	0.9
Covnt	838	875	899	930	962	3.4	3.5
Derby	427	465	474	467	519	11.1	5.0
Donc	222	248	261	259	285	10.0	6.4
Dorset	585	587	609	627	665	6.1	3.3
Dudley	303	287	315	311	305	−1.9	0.2
Exeter	784	809	843	888	950	7.0	4.9
Glouc	374	381	416	410	429	4.6	3.5
Hull	717	755	782	814	804	−1.2	2.9
Ipswi	316	340	339	355	369	3.9	4.0
Kent	795	862	918	961	1,019	6.0	6.4
L Barts	1,761	1,873	1,952	2,097	2,236	6.6	6.2
L Guys	1,627	1,684	1,738	1,830	1,924	5.1	4.3
L Kings	829	872	917	965	1,025	6.2	5.4
L Rfree	1,614	1,727	1,842	1,925	2,010	4.4	5.6
L St.G	679	705	706	755	797	5.6	4.1
L West	2,873	3,010	3,088	3,130	3,244	3.6	3.1
Leeds	1,375	1,421	1,413	1,464	1,500	2.5	2.2
Leic	1,804	1,922	1,975	2,069	2,151	4.0	4.5
Liv Ain	162	190	194	190	218	14.7	7.7
Liv Roy	1,227	1,244	1,237	1,267	1,312	3.6	1.7
M RI	1,557	1,650	1,711	1,855	1,815	−2.2	3.9
Middlbr	711	754	789	832	858	3.1	4.8
Newc	903	919	946	962	983	2.2	2.1
Norwch	616	610	622	690	691	0.1	2.9
Nottm	1,012	1,022	1,012	1,075	1,066	−0.8	1.3
Oxford	1,423	1,451	1,532	1,565	1,658	5.9	3.9
Plymth	462	464	458	502	510	1.6	2.5
Ports	1,330	1,392	1,442	1,547	1,595	3.1	4.6
Prestn	970	1,018	1,078	1,089	1,171	7.5	4.8
Redng	627	688	672	731	763	4.4	5.0
Salford	815	832	880	883	969	9.7	4.4
Sheff	1,248	1,256	1,299	1,329	1,360	2.3	2.2
Shrew	344	345	354	338	349	3.3	0.4
Stevng	607	639	664	755	782	3.6	6.5
Sthend	207	208	213	220	238	8.2	3.6
Stoke	659	695	699	724	776	7.2	4.2
Sund	368	388	422	421	452	7.4	5.3
Truro	335	355	375	371	380	2.4	3.2
Wirral	224	233	225	247	246	−0.4	2.4
Wolve	533	512	524	568	575	1.2	1.9
York	340	340	396	409	461	12.7	7.9

Table 2.3 Continued

Centre	Date					% change 2013–2014	% annual change 2010–2014
	31/12/2010	31/12/2011	31/12/2012	31/12/2013	31/12/2014		
N Ireland							
Antrim	218	225	223	224	229	2.2	1.2
Belfast	680	683	702	726	750	3.3	2.5
Newry	179	189	188	199	208	4.5	3.8
Ulster	114	136	145	155	149	−3.9	6.9
West NI	258	270	253	237	272	14.8	1.3
Scotland							
Abrdn	463	477	504	517	515	−0.4	2.7
Airdrie	327	346	389	389	399	2.6	5.1
D & Gall	115	122	127	117	133	13.7	3.7
Dundee	383	397	395	398	414	4.0	2.0
Edinb	711	696	716	733	758	3.4	1.6
Glasgw	1,484	1,471	1,537	1,586	1,641	3.5	2.5
Inverns	234	227	220	216	227	5.1	−0.8
Klmarnk	284	298	301	296	306	3.4	1.9
Krkldy	263	278	278	284	283	−0.4	1.8
Wales							
Bangor	113	109	105	99	99	0.0	−3.3
Cardff	1,476	1,531	1,544	1,583	1,593	0.6	1.9
Clwyd	138	137	173	152	165	8.6	4.6
Swanse	636	658	662	693	704	1.6	2.6
Wrexm	219	236	248	251	281	12.0	6.4
England	42,646	44,387	45,919	47,863	49,842	4.1	4.0
N Ireland	1,449	1,503	1,511	1,541	1,608	4.3	2.6
Scotland	4,264	4,312	4,467	4,536	4,676	3.1	2.3
Wales	2,582	2,671	2,732	2,778	2,842	2.3	2.4
UK	50,941	52,873	54,629	56,718	58,968	4.0	3.7

Only three of the 147 CCGs/HBs with ethnic minority populations of less than 10% had high SPRs: Abertawe Bro Morgannwg University, Aneurin Bevin and Cwm Taf in Wales. Forty-six (51.1%) of the 90 CCGs/HBs with ethnic minority populations at 10% or greater had high SPRs, whereas nine (10%) (NHS Airedale,

Wharfedale and Craven, NHS Chiltern, NHS Havering, NHS East and North Hertfordshire, NHS Leeds North, NHS Leeds West, NHS Richmond, NHS Solihull, NHS Trafford) 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 (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 prevalence rates but in more recent years were similar to their expected rates. Scotland had lower than expected prevalence rates of RRT as did North and South England. The rate 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

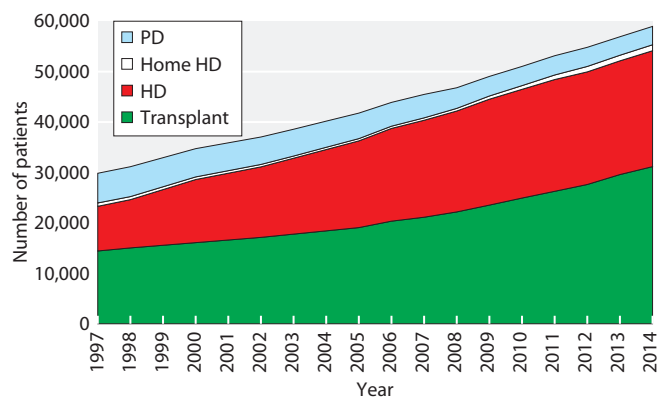


Fig. 2.2. Growth in prevalent patient numbers by treatment modality at the end of each year 1997–2014

Table 2.4 Change in RRT prevalence rates pmp 2010–2014 by modality*

Year	Prevalence					% growth in prevalence pmp				
	HD pmp	PD pmp	Dialysis pmp	Transplant pmp	RRT pmp	HD	PD	Dialysis	Tx	RRT
2010	359	62	421	397	818					
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
2014	374	56	430	482	913	1.3	-1.5	0.9	4.5	2.8
Average annual growth 2010–2014						1.0	-2.3	0.6	5.0	2.8

pmp – per million population

Tx – Transplant

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

2014. Median time on RRT for all prevalent patients remained fairly static at 6.1 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 1.6 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, but decreased slightly since 2008 (median 10.4 years) which may reflect increased use of donation after cardiac death (DCD) donors and transplantation of more marginal and older candidates.

Age

The median age of prevalent UK patients on RRT at 31st December 2014 (58.7 years) (table 2.8) has remained stable over recent years although significantly higher than in 2005 when it was 55 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 (53.3 years). Half of the UK prevalent RRT population was in the 40–64 year age group (table 2.9). The proportion of patients aged 75 years and older varied between countries and was highest in Wales (18.5%) and lowest in Scotland (13.3%) (table 2.9). Within countries there were large differences in the proportion of patients aged over 75, within England these ranged between 8.6% (Liverpool Royal Infirmary) and 40.3% (Colchester). In most centres the prevalent PD population was younger than the HD population.

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 (71.0 years), whilst Belfast the lowest (54.5 years) (table 2.8). This could possibly reflect variation in the catchment populations or follow-up of younger transplant patients (as observed in Belfast). The median age of the non-White dialysis population was lower than the overall dialysis population (61.4 vs. 66.8 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 2014, 65.9% of patients aged less than 65 years on RRT had a functioning transplant (table 2.15), compared with only 30.2% aged 65 years and over. There was a similar pattern in all four UK countries.

Gender

The age distributions of males and females were very similar (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-2013 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 2,274 pmp (a slight increase from 2,218 pmp in 2013) in the age group 75–79 years then a rapid decline thereafter. Crude prevalence rates in males exceeded those of females for all age groups. The differences were smallest in younger patients and were greatest from the age of 70 years onwards. The prevalence rate in males was highest in the 75–79 years group (3,100 pmp) and for females in the 70–74 age group

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

CCG/HB – Clinical Commissioning Groups (CCG) in England, Health and Social Care Areas in Northern Ireland, Local Health Boards in Wales and Health Boards in Scotland

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 2014 are italicised in greyed areas, those with significantly high prevalence ratios in 2014 are bold in greyed areas

Mid-2013 population data from the Office for 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

UK area	CCG/HB	Total population	2009 O/E	2010 O/E	2011 O/E	2012 O/E	2013 O/E	2014			Crude rate pmp	% non-White
								95% O/E	95% LCL	95% UCL		
Cheshire, Warrington and Wirral	<i>NHS Eastern Cheshire</i>	195,500	0.71	0.76	0.77	0.81	0.79	0.79	0.68	0.92	824	3.7
	NHS South Cheshire	177,200	0.94	0.93	0.90	0.87	0.89	0.93	0.80	1.08	914	2.9
	<i>NHS Vale Royal</i>	102,000	0.78	0.75	0.76	0.71	0.77	0.71	0.57	0.90	696	2.1
	NHS Warrington	205,100	0.94	0.85	0.82	0.83	0.85	0.91	0.78	1.05	848	4.1
	NHS West Cheshire	229,000	0.96	0.98	0.99	0.95	0.96	0.94	0.82	1.08	939	2.8
	<i>NHS Wirral</i>	320,300	0.84	0.82	0.81	0.79	0.81	0.73	0.64	0.83	718	3.0
Durham, Darlington and Tees	NHS Darlington	105,400	0.86	0.82	0.78	0.82	0.82	0.82	0.66	1.01	778	3.8
	NHS Durham Dales, Easington and Sedgefield	272,900	0.94	0.94	0.98	0.94	0.98	0.97	0.86	1.10	971	1.2
	NHS Hartlepool and Stockton-on-Tees	285,900	0.87	0.85	0.88	0.92	0.91	0.94	0.83	1.06	868	4.4
	<i>NHS North Durham</i>	243,100	0.78	0.77	0.76	0.84	0.80	0.80	0.69	0.92	765	2.5
	NHS South Tees	273,900	1.08	1.06	1.09	1.08	1.08	1.04	0.92	1.17	968	6.7
Greater Manchester	NHS Bolton	280,100	0.95	1.05	1.09	1.07	1.04	1.00	0.88	1.13	889	18.1
	NHS Bury	186,500	0.93	0.90	0.91	0.92	0.91	0.94	0.81	1.10	869	10.8
	NHS Central Manchester	182,200	1.46	1.54	1.50	1.53	1.64	1.74	1.51	2.00	1,092	48.0
	NHS Heywood, Middleton & Rochdale	212,100	1.02	0.95	1.00	1.01	1.05	1.06	0.92	1.22	933	18.3
	NHS North Manchester	170,700	1.08	1.07	1.08	1.12	1.09	1.12	0.95	1.33	803	30.8
	NHS Oldham	227,300	0.95	0.93	0.93	0.92	0.95	0.94	0.82	1.09	809	22.5
	NHS Salford	239,000	0.82	0.85	0.83	0.86	0.88	0.86	0.74	1.00	728	9.9
	NHS South Manchester	161,500	0.88	0.91	0.90	0.94	0.96	0.96	0.80	1.15	724	19.6
	<i>NHS Stockport</i>	285,000	0.84	0.87	0.89	0.89	0.82	0.82	0.72	0.93	793	7.9
	NHS Tameside and Glossop	253,700	0.93	0.94	0.93	0.92	0.92	0.89	0.78	1.02	828	8.2
	<i>NHS Trafford</i>	230,200	0.75	0.86	0.82	0.84	0.85	0.86	0.74	1.00	786	14.5
NHS Wigan Borough	319,700	0.84	0.85	0.91	0.95	0.97	0.97	0.87	1.09	923	2.7	
Lancashire	NHS Blackburn with Darwen	147,400	1.26	1.24	1.29	1.27	1.26	1.22	1.04	1.43	1,011	30.8
	NHS Blackpool	141,400	0.86	0.79	0.78	0.88	0.99	1.05	0.89	1.23	1,025	3.3
	NHS Chorley and South Ribble	169,500	0.82	0.79	0.84	0.90	0.95	0.94	0.80	1.10	897	2.9
	NHS East Lancashire	372,300	1.02	0.99	1.00	0.95	0.96	0.97	0.87	1.08	905	11.9
	<i>NHS Fylde & Wyre</i>	165,800	0.85	0.82	0.82	0.83	0.83	0.83	0.71	0.97	905	2.1
	NHS Greater Preston	201,700	0.88	0.88	0.84	0.89	0.88	0.87	0.75	1.02	783	14.7
	<i>NHS Lancashire North</i>	159,500	0.70	0.70	0.73	0.73	0.68	0.68	0.56	0.83	646	4.0
	<i>NHS West Lancashire</i>	111,300	0.88	0.88	0.85	0.81	0.77	0.75	0.60	0.93	737	1.9
Merseyside	NHS Halton	126,000	0.92	0.95	1.07	1.03	1.01	1.02	0.85	1.22	937	2.2
	NHS Knowsley	146,100	1.05	0.96	0.95	0.99	0.93	0.96	0.81	1.14	876	2.8
	NHS Liverpool	470,800	1.08	1.05	1.05	1.03	1.01	1.01	0.92	1.11	858	11.1
	NHS South Sefton	158,900	0.85	0.87	0.95	0.95	0.95	0.99	0.84	1.16	969	2.2
	<i>NHS Southport and Formby</i>	114,300	0.77	0.79	0.84	0.76	0.79	0.80	0.66	0.98	857	3.1
	NHS St Helens	176,200	0.90	0.91	0.90	0.91	0.86	0.86	0.73	1.01	840	2.0

Table 2.5 Continued

UK area	CCG/HB	Total population	2009 O/E	2010 O/E	2011 O/E	2012 O/E	2013 O/E	2014			Crude rate pmp	% non-White
								O/E	LCL	95% UCL		
Cumbria, Northumberland, Tyne and Wear	<i>NHS Cumbria</i>	504,100	0.73	0.73	0.72	0.72	0.74	0.74	0.67	0.82	782	1.5
	<i>NHS Gateshead</i>	200,000	0.87	0.85	0.83	0.85	0.77	0.78	0.66	0.91	745	3.7
	NHS Newcastle North and East	143,900	1.01	0.97	1.00	0.94	0.91	0.90	0.74	1.10	709	10.7
	NHS Newcastle West	142,900	0.96	0.87	0.81	0.87	0.85	0.83	0.68	1.01	700	18.3
	NHS North Tyneside	202,200	0.98	0.98	0.92	0.93	0.96	0.89	0.77	1.04	866	3.4
	<i>NHS Northumberland</i>	315,800	0.80	0.75	0.75	0.75	0.73	0.77	0.68	0.87	807	1.6
	NHS South Tyneside	148,500	1.10	1.01	1.03	0.97	0.92	0.85	0.71	1.01	828	4.1
	NHS Sunderland	276,100	0.99	1.00	0.95	0.97	0.92	0.93	0.82	1.05	887	4.1
North Yorkshire and Humber	<i>NHS East Riding of Yorkshire</i>	314,600	0.87	0.83	0.82	0.80	0.78	0.77	0.68	0.87	820	1.9
	<i>NHS Hambleton, Richmondshire and Whitby</i>	153,600	0.63	0.62	0.65	0.67	0.72	0.73	0.61	0.87	755	2.7
	NHS Harrogate and Rural District	158,200	0.87	0.84	0.82	0.87	0.84	0.88	0.75	1.04	891	3.7
	NHS Hull	257,600	1.04	1.01	0.99	0.95	0.96	1.01	0.89	1.15	862	5.9
	NHS North East Lincolnshire	159,800	1.02	0.99	1.08	1.04	1.01	0.95	0.81	1.12	901	2.6
	NHS North Lincolnshire	168,800	0.80	0.76	0.85	0.89	0.96	0.90	0.77	1.06	883	4.0
	<i>NHS Scarborough and Ryedale</i>	110,100	0.92	0.86	0.82	0.84	0.81	0.81	0.66	0.99	853	2.5
	NHS Vale of York	349,100	0.84	0.88	0.90	0.94	0.94	0.92	0.82	1.02	874	4.0
South Yorkshire and Bassetlaw	NHS Barnsley	235,800	1.11	1.12	1.10	1.06	1.03	1.03	0.90	1.17	984	2.1
	NHS Bassetlaw	113,700	0.82	0.80	0.80	0.86	0.81	0.82	0.67	1.00	827	2.6
	NHS Doncaster	303,600	0.97	0.93	0.97	0.96	0.92	0.95	0.85	1.07	896	4.7
	NHS Rotherham	258,700	1.08	1.12	1.06	1.05	1.04	1.03	0.91	1.17	986	6.4
	NHS Sheffield	560,100	1.11	1.14	1.11	1.13	1.12	1.09	1.00	1.19	934	16.3
West Yorkshire	<i>NHS Airedale, Wharfedale and Craven</i>	158,500	0.83	0.83	0.79	0.78	0.80	0.84	0.70	0.99	827	11.1
	NHS Bradford City	82,700	1.78	1.89	1.84	1.95	1.97	2.13	1.76	2.58	1,269	72.2
	NHS Bradford Districts	334,600	1.10	1.13	1.15	1.24	1.21	1.18	1.06	1.32	983	28.7
	NHS Calderdale	206,400	1.08	1.10	1.03	0.96	0.91	0.86	0.74	1.00	804	10.3
	NHS Greater Huddersfield	240,400	0.91	0.96	0.94	0.98	0.96	0.98	0.85	1.11	894	17.4
	<i>NHS Leeds North</i>	199,900	0.97	0.97	0.96	0.93	0.88	0.86	0.73	1.00	805	17.4
	NHS Leeds South and East	241,000	0.96	0.97	0.99	0.98	0.99	1.02	0.89	1.17	838	18.3
	<i>NHS Leeds West</i>	320,500	0.85	0.84	0.81	0.79	0.84	0.87	0.76	0.99	699	10.8
	NHS North Kirklees	187,900	1.20	1.18	1.20	1.15	1.24	1.22	1.07	1.41	1059	25.3
	<i>NHS Wakefield</i>	329,700	0.81	0.81	0.83	0.85	0.84	0.83	0.73	0.93	789	4.6
Arden, Herefordshire and Worcestershire	NHS Coventry and Rugby	431,200	1.19	1.25	1.27	1.32	1.30	1.25	1.14	1.37	1,058	22.2
	<i>NHS Herefordshire</i>	186,100	0.83	0.77	0.78	0.80	0.78	0.78	0.67	0.91	811	1.8
	NHS Redditch and Bromsgrove	179,300	0.94	0.92	0.91	0.95	0.90	0.89	0.76	1.04	859	6.0
	<i>NHS South Warwickshire</i>	259,200	0.94	0.91	0.92	0.89	0.88	0.88	0.77	1.00	872	7.0
	<i>NHS South Worcestershire</i>	294,500	0.79	0.80	0.81	0.84	0.80	0.81	0.71	0.92	818	3.7
	NHS Warwickshire North	188,100	1.10	1.12	1.09	1.01	1.01	1.01	0.88	1.17	978	6.5
	NHS Wyre Forest	98,400	0.94	0.91	0.93	0.89	0.88	0.96	0.79	1.17	996	2.8
Birmingham and the Black Country	NHS Birmingham CrossCity	725,400	1.50	1.44	1.45	1.45	1.43	1.41	1.32	1.51	1,126	35.2
	NHS Birmingham South and Central	201,200	1.64	1.63	1.66	1.71	1.72	1.70	1.51	1.92	1,288	40.4
	NHS Dudley	314,400	0.97	0.95	0.88	0.94	0.94	0.92	0.82	1.03	881	10.0
	NHS Sandwell and West Birmingham	480,100	1.84	1.80	1.76	1.73	1.71	1.69	1.57	1.83	1,335	45.3
	<i>NHS Solihull</i>	208,900	0.99	0.96	0.91	0.88	0.86	0.83	0.71	0.97	809	10.9
	NHS Walsall	272,200	1.27	1.35	1.33	1.30	1.32	1.30	1.17	1.46	1,176	21.1
	NHS Wolverhampton	251,600	1.26	1.22	1.13	1.15	1.15	1.16	1.03	1.31	1,026	32.0

Table 2.5 Continued

UK area	CCG/HB	Total population	2009 O/E	2010 O/E	2011 O/E	2012 O/E	2013 O/E	2014			Crude rate pmp	% non-White
								O/E	95% LCL	95% UCL		
Derbyshire and Nottinghamshire	NHS Erewash	94,900	0.99	0.96	0.99	0.96	0.91	0.86	0.69	1.08	822	3.2
	NHS Hardwick	109,300	0.92	0.85	0.78	0.78	0.74	0.75	0.61	0.93	751	1.8
	NHS Mansfield & Ashfield	193,900	0.98	0.96	0.95	0.91	0.92	0.93	0.80	1.08	887	2.5
	NHS Newark & Sherwood	117,000	1.06	1.05	1.11	1.07	1.03	0.99	0.82	1.18	992	2.4
	NHS North Derbyshire	272,200	0.80	0.80	0.81	0.80	0.79	0.77	0.67	0.88	797	2.5
	NHS Nottingham City	310,800	1.16	1.24	1.17	1.16	1.17	1.17	1.04	1.32	872	28.5
	NHS Nottingham North & East	147,600	0.85	0.85	0.87	0.87	0.83	0.77	0.64	0.93	752	6.2
	NHS Nottingham West	111,200	1.10	1.13	1.06	1.09	1.14	1.13	0.95	1.35	1,115	7.3
	NHS Rushcliffe	112,800	0.91	0.86	0.86	0.77	0.80	0.74	0.59	0.91	727	6.9
NHS Southern Derbyshire	518,200	1.05	1.04	1.03	0.99	0.98	1.00	0.91	1.09	926	11.0	
East Anglia	NHS Cambridgeshire and Peterborough	855,000	0.90	0.91	0.94	0.91	0.94	0.92	0.85	0.99	833	9.5
	NHS Great Yarmouth & Waveney	213,800	0.93	0.98	0.96	0.93	0.95	0.93	0.81	1.06	959	2.7
	NHS Ipswich and East Suffolk	396,100	0.85	0.84	0.83	0.81	0.85	0.84	0.75	0.94	838	5.6
	NHS North Norfolk	168,500	0.98	0.94	0.90	0.86	0.95	0.93	0.80	1.08	1,057	1.5
	NHS Norwich	195,000	0.92	0.90	0.84	0.82	0.89	0.89	0.76	1.04	795	7.3
	NHS South Norfolk	237,400	0.85	0.81	0.81	0.84	0.90	0.86	0.75	0.98	880	2.6
	NHS West Norfolk	171,500	0.90	0.84	0.79	0.76	0.74	0.73	0.62	0.87	781	2.6
	NHS West Suffolk	223,800	0.78	0.83	0.81	0.80	0.79	0.76	0.65	0.88	733	4.6
Essex	NHS Basildon and Brentwood	252,800	0.95	0.95	0.98	0.94	1.03	1.03	0.91	1.17	957	7.1
	NHS Castle Point, Rayleigh and Rochford	172,500	0.89	0.86	0.81	0.80	0.84	0.88	0.75	1.03	916	3.0
	NHS Mid Essex	381,500	0.87	0.84	0.84	0.81	0.85	0.85	0.77	0.95	828	4.4
	NHS North East Essex	316,300	0.91	0.89	0.92	0.90	0.88	0.92	0.82	1.03	907	5.5
	NHS Southend	175,800	0.97	0.94	0.95	0.95	0.99	0.94	0.81	1.11	882	8.4
	NHS Thurrock	160,800	0.97	0.99	1.02	1.02	1.03	1.04	0.88	1.22	870	14.1
	NHS West Essex	293,200	0.72	0.75	0.74	0.84	0.88	0.94	0.83	1.06	880	8.2
Hertfordshire and the South Midlands	NHS Bedfordshire	425,900	0.87	0.91	0.89	0.92	0.93	0.95	0.86	1.06	885	11.2
	NHS Corby	64,200	0.84	0.83	0.90	0.90	0.82	0.88	0.67	1.17	763	4.5
	NHS East and North Hertfordshire	546,300	0.83	0.84	0.88	0.86	0.88	0.91	0.83	0.99	820	10.4
	NHS Herts Valleys	575,800	0.97	0.98	0.95	0.94	0.93	0.95	0.87	1.03	849	14.6
	NHS Luton	208,000	1.25	1.28	1.36	1.37	1.46	1.47	1.29	1.67	1,130	45.3
	NHS Milton Keynes	261,400	0.88	0.90	0.93	0.93	0.95	1.03	0.91	1.18	857	19.6
	NHS Nene	626,600	0.92	0.91	0.92	0.90	0.90	0.90	0.83	0.98	832	9.1
Leicestershire and Lincolnshire	NHS East Leicestershire and Rutland	321,900	0.82	0.81	0.80	0.80	0.80	0.80	0.71	0.90	792	9.8
	NHS Leicester City	333,800	1.66	1.67	1.70	1.71	1.72	1.72	1.56	1.89	1,303	49.5
	NHS Lincolnshire East	229,400	0.84	0.83	0.84	0.86	0.87	0.82	0.72	0.94	898	2.0
	NHS Lincolnshire West	229,600	0.88	0.85	0.88	0.82	0.86	0.87	0.76	1.00	832	3.0
	NHS South Lincolnshire	142,600	0.66	0.72	0.74	0.76	0.72	0.72	0.60	0.87	744	2.3
	NHS South West Lincolnshire	122,800	0.66	0.73	0.76	0.76	0.74	0.71	0.57	0.87	716	2.3
	NHS West Leicestershire	377,300	0.90	0.91	0.92	0.90	0.91	0.90	0.81	1.01	864	6.9
Shropshire and Staffordshire	NHS Cannock Chase	133,600	0.97	0.92	0.97	0.88	0.95	0.94	0.79	1.13	906	2.4
	NHS East Staffordshire	124,600	0.73	0.78	0.75	0.76	0.77	0.78	0.64	0.96	747	9.0
	NHS North Staffordshire	214,400	0.93	0.90	0.95	0.91	0.92	0.89	0.77	1.02	891	3.5
	NHS Shropshire	308,600	0.91	0.86	0.85	0.83	0.78	0.78	0.69	0.88	807	2.0
	NHS South East Staffs and Seisdon and Peninsular	224,500	0.97	0.97	0.98	0.90	0.88	0.87	0.75	1.00	869	3.6
	NHS Stafford and Surrounds	151,700	0.77	0.82	0.84	0.84	0.82	0.86	0.72	1.01	877	4.7
	NHS Stoke on Trent	258,400	1.13	1.13	1.13	1.09	1.07	1.13	1.00	1.27	1,014	11.0
	NHS Telford & Wrekin	168,500	1.04	1.04	1.03	1.00	1.03	0.99	0.84	1.16	885	7.3

Table 2.5 Continued

UK area	CCG/HB	Total population	2009 O/E	2010 O/E	2011 O/E	2012 O/E	2013 O/E	2014			Crude rate pmp	% non-White
								O/E	LCL	95% UCL		
London	NHS Barking & Dagenham	194,400	1.21	1.30	1.42	1.47	1.49	1.54	1.34	1.76	1,086	41.7
	NHS Barnet	369,100	1.37	1.43	1.43	1.48	1.46	1.46	1.33	1.60	1,195	35.9
	NHS Camden	229,700	1.15	1.19	1.20	1.19	1.19	1.18	1.03	1.35	914	33.7
	NHS City and Hackney	265,000	1.31	1.43	1.47	1.53	1.55	1.60	1.42	1.79	1,098	44.6
	NHS Enfield	320,500	1.39	1.42	1.51	1.54	1.53	1.54	1.40	1.70	1,235	39.0
	NHS Haringey	263,400	1.37	1.37	1.49	1.59	1.64	1.66	1.49	1.85	1,245	39.5
	NHS Havering	242,100	0.86	0.83	0.88	0.90	0.85	0.85	0.73	0.98	785	12.3
	NHS Islington	215,700	1.21	1.26	1.33	1.46	1.49	1.47	1.29	1.67	1,080	31.8
	NHS Newham	318,200	1.45	1.63	1.74	1.79	1.89	1.97	1.79	2.17	1,292	71.0
	NHS Redbridge	288,300	1.31	1.39	1.37	1.43	1.49	1.51	1.36	1.68	1,183	57.5
	NHS Tower Hamlets	272,900	1.24	1.30	1.33	1.44	1.53	1.63	1.45	1.83	1,022	54.8
	NHS Waltham Forest	265,800	1.35	1.42	1.50	1.45	1.50	1.61	1.44	1.80	1,215	47.8
	NHS Brent	317,300	1.99	2.10	2.10	2.12	2.10	2.15	1.97	2.34	1,680	63.7
	NHS Central London (Westminster)	162,700	1.03	1.06	1.14	1.11	1.19	1.22	1.05	1.42	1,039	36.2
	NHS Ealing	342,500	1.83	1.87	1.86	1.93	1.90	1.91	1.75	2.08	1,515	51.0
	NHS Hammersmith and Fulham	178,700	1.27	1.27	1.28	1.29	1.23	1.26	1.09	1.46	957	31.9
	NHS Harrow	243,400	1.76	1.83	1.88	1.88	1.79	1.77	1.60	1.96	1,516	57.8
	NHS Hillingdon	286,800	1.33	1.34	1.43	1.46	1.48	1.49	1.34	1.65	1,206	39.4
	NHS Hounslow	262,400	1.39	1.44	1.50	1.52	1.62	1.61	1.45	1.80	1,265	48.6
	NHS West London (Kensington and Chelsea, Queen's Park and Paddington)	219,800	1.20	1.21	1.24	1.23	1.22	1.28	1.13	1.46	1,078	33.4
	NHS Bexley	236,700	1.24	1.26	1.25	1.25	1.24	1.26	1.12	1.42	1,120	18.1
	NHS Bromley	317,900	0.99	1.02	1.00	0.97	0.98	0.99	0.88	1.11	906	15.7
	NHS Croydon	372,800	1.35	1.34	1.38	1.44	1.49	1.52	1.39	1.67	1,250	44.9
	NHS Greenwich	264,000	1.13	1.25	1.26	1.24	1.38	1.42	1.27	1.60	1,072	37.5
	NHS Kingston	166,800	1.15	1.13	1.14	1.14	1.08	1.10	0.94	1.29	905	25.5
	NHS Lambeth	314,200	1.59	1.56	1.62	1.69	1.72	1.79	1.63	1.98	1,286	42.9
	NHS Lewisham	286,200	1.59	1.57	1.61	1.64	1.65	1.64	1.48	1.82	1,233	46.5
NHS Merton	203,200	1.26	1.26	1.28	1.33	1.32	1.38	1.21	1.57	1,112	35.1	
NHS Richmond	191,400	0.76	0.78	0.77	0.76	0.78	0.78	0.66	0.93	685	14.0	
NHS Southwark	298,500	1.63	1.71	1.78	1.83	1.89	1.92	1.75	2.12	1,387	45.8	
NHS Sutton	195,900	1.17	1.19	1.20	1.21	1.16	1.18	1.03	1.35	1,031	21.4	
NHS Wandsworth	310,500	1.31	1.32	1.28	1.21	1.20	1.28	1.14	1.44	937	28.6	
Bath, Gloucestershire, Swindon and Wiltshire	NHS Bath and North East Somerset	180,100	0.84	0.85	0.81	0.81	0.83	0.82	0.69	0.97	755	5.4
	NHS Gloucestershire	605,700	0.88	0.87	0.88	0.90	0.89	0.87	0.80	0.95	857	4.6
	NHS Swindon	219,300	0.88	0.91	0.94	0.96	0.97	0.99	0.86	1.14	875	10.0
	NHS Wiltshire	479,600	0.75	0.75	0.76	0.73	0.74	0.74	0.66	0.82	717	3.4
Bristol, North Somerset, Somerset and South Gloucestershire	NHS Bristol	437,500	1.25	1.22	1.24	1.27	1.31	1.30	1.19	1.43	1,035	16.0
	NHS North Somerset	206,100	0.92	0.91	0.92	0.95	0.95	0.95	0.83	1.09	970	2.7
	NHS Somerset	538,100	0.84	0.86	0.87	0.84	0.82	0.83	0.76	0.91	851	2.0
	NHS South Gloucestershire	269,100	0.91	0.97	0.93	0.92	0.97	0.94	0.83	1.07	888	5.0
Devon, Cornwall and Isles of Scilly	NHS Kernow	543,600	1.02	1.00	0.97	0.96	0.96	0.94	0.87	1.03	984	1.8
	NHS North, East, West Devon	874,300	0.94	0.94	0.93	0.93	0.92	0.92	0.86	0.98	914	3.0
	NHS South Devon and Torbay	275,000	0.99	1.04	1.01	1.00	1.05	1.05	0.94	1.17	1,131	2.1
Kent and Medway	NHS Ashford	121,700	1.08	1.07	1.05	1.07	1.03	1.02	0.85	1.23	953	6.3
	NHS Canterbury and Coastal	202,400	0.98	0.98	0.96	0.96	0.99	1.06	0.92	1.22	993	5.9
	NHS Dartford, Gravesham and Swanley	251,900	1.07	1.06	1.04	1.05	1.08	1.11	0.98	1.25	1008	13.0

Table 2.5 Continued

UK area	CCG/HB	Total population	2009 O/E	2010 O/E	2011 O/E	2012 O/E	2013 O/E	2014			Crude rate pmp	% non-White
								O/E	95% LCL	95% UCL		
Kent and Medway cont.	NHS Medway	271,100	0.88	0.88	0.89	0.91	0.95	0.94	0.83	1.08	823	10.4
	NHS South Kent Coast	203,600	0.80	0.82	0.85	0.82	0.78	0.82	0.71	0.96	835	4.5
	NHS Swale	109,600	1.01	1.01	1.04	1.13	1.14	1.10	0.92	1.33	1,022	3.8
	NHS Thanet	136,800	0.90	1.02	1.03	1.08	1.14	1.10	0.93	1.29	1,082	4.5
	NHS West Kent	467,500	0.82	0.78	0.80	0.82	0.80	0.83	0.75	0.92	785	4.9
Surrey and Sussex	NHS Brighton & Hove	278,100	0.87	0.84	0.83	0.87	0.83	0.89	0.77	1.02	737	10.9
	NHS Coastal West Sussex	480,200	0.86	0.84	0.80	0.82	0.81	0.82	0.74	0.90	864	3.8
	NHS Crawley	109,000	1.04	1.17	1.07	1.00	0.96	0.94	0.76	1.17	780	20.1
	NHS East Surrey	177,900	0.80	0.85	0.78	0.84	0.90	0.84	0.71	0.99	781	8.3
	NHS Eastbourne, Hailsham and Seaford	183,500	0.76	0.80	0.76	0.82	0.83	0.83	0.71	0.97	872	4.4
	NHS Guildford and Waverley	207,800	0.70	0.68	0.65	0.69	0.66	0.66	0.56	0.79	611	7.2
	NHS Hastings & Rother	181,800	0.76	0.78	0.76	0.75	0.80	0.79	0.67	0.93	825	4.6
	NHS High Weald Lewes Havens	169,100	0.73	0.67	0.66	0.73	0.71	0.73	0.61	0.87	751	3.1
	NHS Horsham and Mid Sussex	225,300	0.75	0.72	0.76	0.71	0.72	0.71	0.60	0.83	683	4.9
	NHS North West Surrey	340,200	0.98	0.97	0.97	0.97	0.96	0.99	0.89	1.11	923	12.5
	NHS Surrey Downs	284,700	0.91	0.91	0.92	0.89	0.90	0.86	0.76	0.97	839	9.1
NHS Surrey Heath	94,400	1.00	1.00	0.97	0.98	0.90	0.83	0.66	1.04	795	9.3	
Thames Valley	NHS Aylesbury Vale	199,500	0.97	0.97	0.95	0.95	0.93	0.91	0.79	1.06	852	9.7
	NHS Bracknell and Ascot	134,400	0.85	0.87	0.85	0.84	0.94	0.97	0.81	1.17	856	9.5
	NHS Chiltern	319,400	0.90	0.88	0.85	0.84	0.88	0.86	0.76	0.97	817	15.8
	NHS Newbury and District	105,700	1.03	0.94	0.99	0.93	0.97	1.01	0.83	1.23	937	4.4
	NHS North & West Reading	99,900	0.90	0.87	0.86	0.85	0.87	0.88	0.71	1.09	821	10.4
	NHS Oxfordshire	652,300	0.87	0.89	0.91	0.92	0.91	0.90	0.83	0.98	817	9.3
	NHS Slough	143,000	1.73	1.78	1.87	1.90	1.90	1.88	1.64	2.16	1,377	54.3
	NHS South Reading	109,000	1.57	1.53	1.42	1.34	1.49	1.54	1.29	1.84	1,101	30.5
	NHS Windsor, Ascot and Maidenhead	139,900	0.94	0.96	0.97	0.98	1.01	1.07	0.90	1.27	972	14.7
NHS Wokingham	157,900	0.91	0.86	0.93	0.90	0.91	0.86	0.72	1.02	798	11.6	
Wessex	NHS Dorset	754,500	0.86	0.84	0.81	0.81	0.79	0.80	0.74	0.86	823	4.0
	NHS Fareham and Gosport	197,100	0.85	0.86	0.86	0.83	0.89	0.88	0.76	1.02	873	3.4
	NHS Isle of Wight	138,400	0.57	0.58	0.62	0.67	0.77	0.76	0.63	0.92	824	2.7
	NHS North East Hampshire and Farnham	207,500	0.84	0.85	0.84	0.86	0.90	0.91	0.78	1.06	824	9.7
	NHS North Hampshire	217,800	0.70	0.72	0.69	0.69	0.71	0.76	0.65	0.89	707	6.4
	NHS Portsmouth	207,500	0.89	0.87	0.91	0.94	0.98	0.94	0.80	1.10	762	11.6
	NHS South Eastern Hampshire	209,900	0.88	0.89	0.88	0.83	0.86	0.87	0.75	1.00	877	3.1
	NHS Southampton	242,100	0.91	0.96	0.99	1.03	1.00	0.99	0.85	1.14	776	14.1
	NHS West Hampshire	548,000	0.80	0.77	0.77	0.77	0.76	0.75	0.68	0.83	763	3.9
Wales	Betsi Cadwaladr University	692,000	0.94	0.91	0.87	0.88	0.81	0.84	0.77	0.91	837	2.5
	Powys Teaching	132,700	0.95	0.90	0.87	0.86	0.83	0.77	0.64	0.93	836	1.6
	Hywel Dda	383,900	0.99	0.93	0.94	0.89	0.93	0.93	0.84	1.03	951	2.2
	Abertawe Bro Morgannwg University	520,700	1.24	1.27	1.26	1.23	1.18	1.11	1.02	1.20	1,058	3.9
	Cwm Taf	295,100	1.37	1.30	1.36	1.28	1.26	1.22	1.09	1.36	1,138	2.6
	Aneurin Bevan	579,100	1.09	1.12	1.11	1.10	1.08	1.09	1.01	1.18	1,041	3.9
	Cardiff and Vale University	478,900	1.07	1.07	1.05	1.03	1.04	0.99	0.89	1.09	837	12.2
Scotland	Ayrshire and Arran	372,200	1.08	1.07	1.01	0.99	0.94	0.94	0.85	1.04	951	1.2
	Borders	113,900	1.02	1.05	0.96	0.91	0.87	0.85	0.70	1.03	913	1.3
	Dumfries and Galloway	150,300	0.90	0.88	0.87	0.86	0.79	0.82	0.69	0.97	885	1.2
	Fife	366,900	0.93	0.94	0.99	0.96	0.95	0.91	0.81	1.01	883	2.4

Table 2.5 Continued

UK area	CCG/HB	Total population	2009 O/E	2010 O/E	2011 O/E	2012 O/E	2013 O/E	2014			Crude rate pmp	% non-White
								O/E	95% LCL	95% UCL		
Scotland cont.	Forth Valley	299,700	0.90	0.92	0.87	0.84	0.84	0.85	0.75	0.96	814	2.2
	Grampian	579,200	0.92	0.92	0.92	0.95	0.94	0.89	0.82	0.98	837	4.0
	Greater Glasgow and Clyde	1,137,900	1.06	1.04	1.03	1.05	1.03	1.02	0.96	1.08	925	7.3
	Highland	321,000	1.00	0.95	0.87	0.84	0.81	0.80	0.71	0.90	826	1.3
	Lanarkshire	652,600	0.94	0.94	0.92	0.97	0.95	0.95	0.87	1.03	895	2.0
	Lothian	849,700	0.87	0.84	0.80	0.81	0.79	0.79	0.73	0.85	708	5.6
	Orkney	21,600	0.96	0.87	0.74	0.76	0.83	0.62	0.37	1.04	649	0.7
	Shetland	23,200	0.53	0.57	0.50	0.48	0.51	0.58	0.33	0.99	560	1.5
	Tayside	412,200	1.05	1.02	1.01	0.96	0.93	0.94	0.85	1.04	922	3.2
	Western Isles	27,400	0.66	0.79	0.65	0.55	0.50	0.65	0.41	1.01	693	0.9
Northern Ireland	Belfast	349,600	1.12	1.12	1.10	1.12	1.11	1.10	0.99	1.23	932	3.2
	Northern	466,700	1.04	1.00	1.03	1.02	1.00	1.00	0.91	1.10	891	1.2
	Southern	365,700	0.96	0.98	1.00	0.95	0.96	0.96	0.86	1.08	801	1.2
	South Eastern	350,800	0.93	0.86	0.88	0.86	0.83	0.81	0.71	0.91	735	1.3
	Western	296,900	1.11	1.10	1.06	0.96	0.94	1.00	0.88	1.13	852	1.0

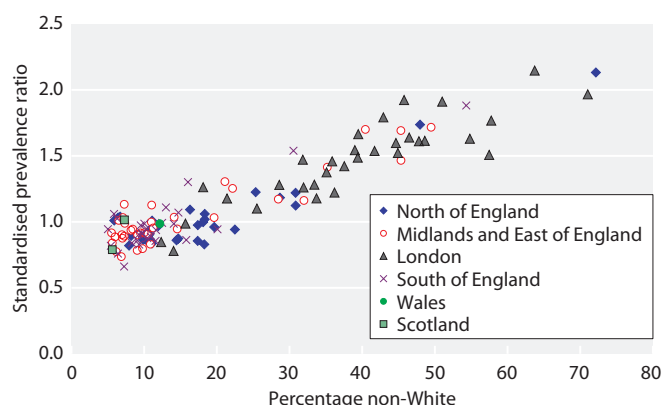


Fig. 2.3. Standardised prevalence ratios for CCG/HB areas by percentage non-White on 31/12/2014 (excluding areas with <5% ethnic minorities)

Table 2.7 Median time on RRT of prevalent patients on 31/12/2014

Modality	N	Median time treated (years)
Haemodialysis	23,703	3.4
Peritoneal dialysis	3,595	1.6
Transplant	29,848	10.1
All RRT	57,146	6.1

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 2014

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 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 31/12/2014

Centre	Median age				Centre	Median age			
	HD	PD	Transplant	RRT		HD	PD	Transplant	RRT
England					Prestn	65.9	64.4	53.3	59.6
B Heart	67.0	64.0	52.0	62.9	Redng	69.8	65.8	57.1	61.6
B QEH	63.9	60.5	52.3	57.6	Salford	63.1	60.5	52.2	58.1
Basldn	66.7	61.7	53.6	63.2	Sheff	66.7	65.1	52.9	58.7
Bradfd	60.5	53.7	51.8	54.7	Shrew	68.0	56.9	55.2	62.5
Brightn	67.2	65.3	54.4	60.9	Stevng	68.3	68.6	53.2	61.7
Bristol	70.3	63.9	54.2	59.3	Sthend	70.1	67.4	55.8	63.8
Camb	73.3	74.5	52.8	58.6	Stoke	67.7	68.0	51.3	59.5
Carlis	67.6	68.3	54.0	59.9	Sund	64.4	61.9	55.0	58.2
Carsh	69.6	65.5	54.2	61.7	Truro	70.9	70.4	57.2	63.0
Chelms	68.6	68.7	60.2	64.1	Wirral	67.6	63.7	56.9	66.3
Colchr	71.0			71.0	Wolve	66.1	63.6	51.4	60.4
Covnt	68.1	64.6	52.1	58.3	York	67.8	61.4	53.3	57.9
Derby	67.6	58.5	54.4	61.1	N Ireland				
Donc	66.5	64.2	56.9	64.0	Antrim	73.0	66.4	53.1	63.7
Dorset	73.0	72.6	57.2	65.5	Belfast	67.9	71.3	51.1	54.5
Dudley	67.9	58.3	56.9	64.5	Newry	65.3	67.7	54.1	60.1
Exeter	73.0	67.3	54.3	63.2	Ulster	73.5	60.0	52.2	66.7
Glouc	71.6	63.3	54.0	65.4	West NI	70.8	71.7	52.0	59.2
Hull	67.8	60.1	53.0	58.9	Scotland				
Ipswi	66.8	68.5	55.9	61.2	Abrdn	65.4	55.8	51.1	56.9
Kent	71.1	69.2	54.2	61.3	Airdrie	64.4	51.2	52.7	56.8
L Barts	61.0	62.0	51.1	55.7	D & Gall	67.0	68.1	53.1	59.5
L Guys	61.5	63.4	51.1	54.6	Dundee	67.1	64.5	52.7	60.3
L Kings	63.3	63.3	54.5	58.8	Edinb	59.4	67.6	53.0	55.1
L Rfree	68.6	65.5	52.4	57.5	Glasgw	66.7	58.4	52.9	56.9
L St.G	65.2	70.3	54.9	60.4	Inverns	68.5	56.4	49.7	55.8
L West	65.9	69.1	54.9	59.3	Klmarnk	66.2	62.3	53.4	58.3
Leeds	64.4	56.1	53.7	56.6	Krkldy	69.8	62.8	53.2	61.5
Leic	67.7	65.2	53.0	59.3	Wales				
Liv Ain	70.0	56.6	47.5	66.4	Bangor	68.1	66.9	42.7	67.9
Liv Roy	62.2	62.3	53.1	55.4	Cardff	68.5	64.8	53.1	57.8
M RI	63.8	62.7	51.8	55.0	Clwyd	65.6	74.0	57.1	64.5
Middlbr	67.7	66.1	54.0	58.2	Swanse	71.5	65.4	56.9	64.0
Newc	63.5	64.9	54.9	56.7	Wrexm	73.2	61.9	54.5	59.9
Norwch	70.0	64.8	54.9	61.0	England	67.0	64.2	53.4	58.8
Nottm	70.5	64.5	52.7	57.9	N Ireland	70.0	67.2	51.8	58.1
Oxford	66.5	66.9	52.7	56.3	Scotland	66.1	61.7	52.6	57.1
Plymth	70.0	64.5	55.7	60.4	Wales	69.6	65.6	54.0	60.3
Ports	66.7	65.7	54.0	58.7	UK	67.2	64.2	53.3	58.7

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

at 1,600 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 the patient groups. As such, the completeness of ethnicity data provided by renal centres is important. Sixty-two of the 71 centres (87.3%) provided ethnicity data that were

at least 90% complete (table 2.10), an improvement compared with 61 of 71 centres (85.9%) in 2013 and only 36 centres in 2006. Overall ethnicity completeness for prevalent RRT patients continued to improve with 93.6% data completeness for the UK in 2014 compared to 92.8% in 2013. Data completeness differed between countries with 98.7% ethnicity completeness in England, 99.9% completeness in Wales and 99.8% in Northern Ireland. Completeness of ethnicity data from Scotland

Table 2.9 Percentage of prevalent RRT patients in each age group by centre on 31/12/2014

Centre	N	Percentage of patients			
		18–39 years	40–64 years	65–74 years	75+ years
England					
B Heart	638	11.8	43.7	21.0	23.5
B QEH	2,137	14.6	52.9	18.4	14.1
Basldn	280	11.8	41.8	23.6	22.9
Bradfd	549	20.9	51.0	17.5	10.6
Brightn	916	10.9	47.9	21.9	19.2
Bristol	1,460	14.6	46.8	21.6	17.1
Camb	1,243	14.6	49.0	20.2	16.2
Carlisle	250	12.4	50.8	20.0	16.8
Carsh	1,565	9.5	45.7	23.3	21.5
Chelms	263	8.7	44.5	23.2	23.6
Colchr	119	7.6	21.8	30.3	40.3
Covnt	962	12.9	50.3	20.4	16.4
Derby	519	12.5	46.4	25.6	15.4
Donc	285	9.5	43.2	21.8	25.6
Dorset	665	9.6	39.8	26.3	24.2
Dudley	305	7.9	44.9	22.6	24.6
Exeter	950	10.7	43.2	24.0	22.1
Glouc	429	9.3	40.1	26.3	24.2
Hull	804	14.2	49.6	20.3	15.9
Ipswi	369	10.0	49.9	24.4	15.7
Kent	1,019	11.8	46.4	24.1	17.7
L Barts	2,236	15.9	56.2	17.0	10.9
L Guys	1,924	19.4	54.1	16.5	10.0
L Kings	1,025	11.1	51.7	19.2	18.0
L Rfree	2,010	16.1	49.4	18.7	15.8
L St.G	797	12.3	51.7	19.9	16.1
L West	3,244	12.0	52.9	20.7	14.4
Leeds	1,500	16.7	51.5	19.4	12.5
Leic	2,151	13.3	48.3	22.2	16.2
Liv Ain	218	7.3	39.9	21.1	31.7
Liv Roy	1,309	16.7	56.7	18.1	8.6
M RI	1,815	17.0	54.5	18.8	9.7
Middlbr	858	14.6	48.4	21.6	15.5
Newc	983	14.1	53.4	20.0	12.4
Norwch	691	11.0	45.2	22.7	21.1
Nottm	1,066	15.9	48.1	19.5	16.4
Oxford	1,658	14.1	54.5	18.1	13.3
Plymth	510	12.5	48.6	23.7	15.1
Ports	1,595	12.7	50.6	21.1	15.5
Prestn	1,171	11.9	50.0	23.8	14.3
Redng	763	9.6	48.6	23.3	18.5
Salford	969	13.8	52.7	19.5	13.9
Sheff	1,360	13.6	51.1	19.2	16.1
Shrew	349	10.0	45.3	24.4	20.3
Stevng	782	9.1	45.9	20.8	24.2
Sthend	238	10.5	41.6	24.8	23.1
Stoke	776	13.3	47.6	20.1	19.1
Sund	452	12.4	52.4	22.8	12.4
Truro	380	11.3	42.1	22.6	23.9
Wirral	246	7.7	39.4	25.6	27.2
Wolve	575	10.3	50.3	18.6	20.9
York	461	17.1	48.4	19.3	15.2

Table 2.9 Continued

Centre	N	Percentage of patients			
		18–39 years	40–64 years	65–74 years	75+ years
N Ireland					
Antrim	229	8.3	43.7	22.3	25.8
Belfast	750	19.1	52.7	15.5	12.8
Newry	208	13.0	50.0	21.2	15.9
Ulster	149	8.7	36.9	21.5	32.9
West NI	272	13.2	45.6	23.9	17.3
Scotland					
Abrdn	515	19.4	50.5	16.9	13.2
Airdrie	399	14.8	51.6	19.0	14.5
D & Gall	133	12.8	44.4	21.8	21.1
Dundee	414	9.7	50.5	21.3	18.6
Edinb	758	15.0	57.3	18.2	9.5
Glasgw	1,641	13.9	55.3	19.2	11.6
Inverns	227	11.0	60.8	15.9	12.3
Klmarnk	306	9.5	54.2	22.2	14.1
Krkldy	283	11.7	44.9	23.3	20.1
Wales					
Bangor	102	10.8	31.4	29.4	28.4
Cardff	1,593	13.9	51.9	20.5	13.8
Clwyd	165	10.3	41.2	27.9	20.6
Swanse	704	10.8	41.6	22.9	24.7
Wrexm	281	15.7	43.1	16.4	24.9
England	49,839	13.5	49.9	20.6	16.0
N Ireland	1,608	14.8	48.4	19.2	17.7
Scotland	4,676	13.8	53.6	19.3	13.3
Wales	2,845	13.0	47.1	21.4	18.5
UK	58,968	13.5	50.0	20.5	16.0
Range (Min : Max)		(7.3 : 20.9)	(21.8 : 60.8)	(15.5 : 30.3)	(8.6 : 40.3)

was low at 33.2% although this marks a large improvement on 24% in 2013. Completeness of ethnicity data was highest in prevalent transplant patients. This is likely to reflect improved data recording during the intensive work-up for transplantation.

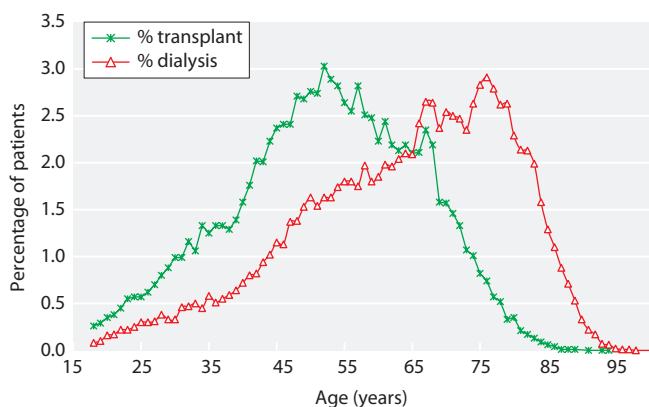


Fig. 2.4. Age profile of prevalent RRT patients by modality on 31/12/2014

In 2014, 21.5% of the prevalent UK RRT population (with ethnicity assigned) were from ethnic minorities (23.7% 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

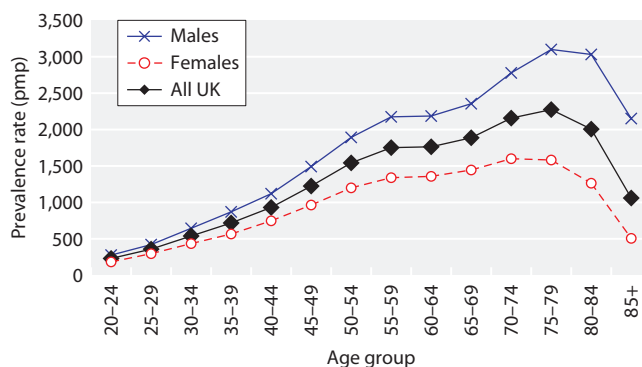


Fig. 2.5. Prevalence rate of RRT patients per million population by age and gender on 31/12/2014

Table 2.10 Ethnicity of prevalent RRT patients by centre on 31/12/2014

Centre	Percentage data not available	N with data	Percentage in each ethnic group*				
			White	Black	S Asian	Chinese	Other
England							
B Heart	0.0	638	59.2	7.8	31.0	0.8	1.1
B QEH	0.0	2,137	62.2	10.1	24.8	0.7	2.2
Basldn	0.7	278	86.7	6.1	4.7	0.7	1.8
Bradfd	0.2	548	56.2	2.0	40.9	0.5	0.4
Brightn	2.0	898	92.0	2.3	3.7	0.2	1.8
Bristol	0.1	1,459	89.7	4.5	3.9	0.3	1.6
Camb	2.3	1,215	91.9	1.6	4.9	0.5	1.1
Carlis	0.0	250	98.4	0.4	0.8	0.0	0.4
Carsh	2.4	1,528	70.6	9.3	14.5	1.5	4.1
Chelms	9.5	238	92.0	3.8	1.3	1.3	1.7
Colchr	5.0	113	95.6	0.0	2.7	0.9	0.9
Covnt	0.5	957	79.8	3.9	15.7	0.6	0.0
Derby	0.0	519	81.1	3.3	13.7	0.4	1.5
Donc	0.0	285	95.1	1.4	2.5	0.0	1.1
Dorset	0.0	665	97.7	0.2	0.9	0.3	0.9
Dudley	1.0	302	85.4	2.6	9.6	0.7	1.7
Exeter	0.2	948	98.9	0.4	0.3	0.1	0.2
Glouc	0.0	429	94.4	1.6	3.0	0.0	0.9
Hull	1.6	791	96.8	0.4	1.5	0.3	1.0
Ipswi	10.0	332	93.4	3.6	2.7	0.3	0.0
Kent	1.1	1,008	94.9	1.0	2.3	0.3	1.5
L Barts	0.0	2,235	38.4	33.8	26.0	1.3	0.4
L Guys	1.2	1,900	63.8	23.5	7.4	1.2	4.2
L Kings	0.0	1,025	49.1	35.7	10.6	1.7	2.9
L Rfree	2.3	1,963	48.3	23.0	20.0	1.5	7.2
L St.G	4.9	758	47.6	22.8	21.2	2.2	6.1
L West	0.1	3,241	43.5	18.4	34.2	1.2	2.7
Leeds	0.2	1,497	80.4	4.8	13.7	0.5	0.6
Leic	2.4	2,100	75.9	3.7	18.6	0.5	1.4
Liv Ain	0.9	216	95.8	1.4	1.4	0.5	0.9
Liv Roy	1.8	1,285	92.6	2.2	1.9	1.2	2.1
M RI	1.4	1,790	76.6	8.2	12.4	0.9	1.8
Middlbr	0.0	858	94.5	0.2	4.5	0.5	0.2
Newc	0.1	982	92.4	1.1	4.9	0.9	0.7
Norwch	2.2	676	97.3	0.7	0.6	1.2	0.1
Nottm	0.2	1,064	86.2	4.9	7.0	0.1	1.9
Oxford	5.4	1,569	82.7	4.1	9.4	0.8	2.9
Plymth	0.0	510	97.1	0.4	0.6	0.4	1.6
Ports	2.9	1,548	94.1	1.1	3.3	0.0	1.6
Prestn	0.1	1,170	86.1	0.9	12.6	0.0	0.4
Redng	3.5	736	72.4	5.2	20.2	0.5	1.6
Salford	0.0	969	81.9	1.8	14.7	0.5	1.1
Sheff	0.7	1,350	90.6	2.3	4.3	0.9	1.9
Shrew	0.0	349	94.6	1.4	3.2	0.3	0.6
Stevng	1.7	769	72.2	10.1	15.7	0.5	1.4
Sthend	4.6	227	84.6	3.5	4.0	2.2	5.7
Stoke	0.5	772	93.1	1.2	4.1	0.1	1.4
Sund	0.0	452	96.7	0.4	2.7	0.2	0.0
Truro	0.0	380	99.5	0.0	0.3	0.0	0.3
Wirral	0.0	246	96.7	0.0	2.0	1.2	0.0
Wolve	0.2	574	70.2	8.7	20.4	0.5	0.2
York	1.1	456	97.4	0.7	1.3	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	229	99.1	0.4	0.4	0.0	0.0
Belfast	0.1	749	98.1	0.3	1.2	0.3	0.1
Newry	0.0	208	99.5	0.0	0.0	0.5	0.0
Ulster	0.0	149	96.0	0.7	2.0	1.3	0.0
West NI	0.7	270	98.9	0.4	0.4	0.4	0.0
Scotland							
Abrdn	59.4	209					
Airdrie	31.1	275	98.5	0.7	0.7	0.0	0.0
D & Gall	76.7	31					
Dundee	59.2	169					
Edinb	77.8	168					
Glasgw	80.4	322					
Inverns	27.3	165	97.6	0.0	1.8	0.0	0.6
Klmarnk	53.6	142					
Krkldy	74.6	72					
Wales							
Bangor	0.0	102	98.0	0.0	1.0	0.0	1.0
Cardff	0.0	1,593	93.5	1.1	4.3	0.6	0.6
Clwyd	1.2	163	98.2	0.6	1.2	0.0	0.0
Swanse	0.0	704	97.7	0.3	1.7	0.0	0.3
Wrexm	0.0	281	97.9	0.7	0.7	0.4	0.4
England	1.3	49,205	76.3	8.5	12.6	0.7	1.9
N Ireland	0.2	1,605	98.4	0.3	0.9	0.4	0.1
Scotland	66.8	1,553					
Wales	0.1	2,843	95.4	0.8	3.0	0.4	0.5
UK	6.4	55,206	78.5	7.6	11.4	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

was a high level of missing ethnicity data in Scotland as described above. The ONS estimates that approximately 14% of the UK general population are 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 21.5% in 2014 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 0.5% in Truro and Newry to over 55% in London Barts (61.6%) and London West (56.5%).

Primary renal diagnosis

Primary renal diagnosis (PRD) is associated with patient outcomes. As PRD data could be used for case-mix adjustment, high level of data completeness is

important. Data for PRD were not complete for 3.4% of patients (table 2.11), but there exists 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, 47% uncertain PRD); the UK and national totals have been appropriately adjusted. The percentage of patients with uncertain aetiology for the remaining 70 centres ranged between 4.2% and 35.0%, which is comparable to 2013. Completeness of PRD data has also continued to improve and no centre had $>30\%$ missing data in 2014.

As observed in previous years, glomerulonephritis (GN) is the most common primary renal diagnosis in the 2014 prevalent cohort at 18.9% (table 2.11). Diabetes accounted for 16.1% of renal disease in prevalent patients on RRT, although it was more common in the ≥ 65 year age group compared to the younger group (17.8% vs.

Table 2.11. Primary renal diagnosis in prevalent RRT patients by age and gender on 31/12/2014

Primary diagnosis*	N	% all patients	Intercentre range %	Age <65		Age ≥65		M:F ratio
				N	%	N	%	
Aetiology uncertain	9,272	15.8	4.2–35.0	5,186	13.9	4,086	19.1	1.6
Glomerulonephritis	11,137	18.9	7.7–25.8	7,991	21.3	3,146	14.7	2.1
Pyelonephritis	6,242	10.6	4.1–20.5	4,605	12.3	1,637	7.6	1.1
Diabetes	9,456	16.1	10.5–26.1	5,638	15.1	3,818	17.8	1.7
Polycystic kidney	5,791	9.8	3.2–16.0	3,738	10.0	2,053	9.6	1.1
Hypertension	3,580	6.1	1.3–17.0	1,938	5.2	1,642	7.7	2.4
Renal vascular disease	1,747	3.0	0.5–11.9	379	1.0	1,368	6.4	1.9
Other	9,632	16.4	8.8–30.7	6,725	18.0	2,907	13.6	1.3
Not sent	1,992	3.4	0.0–23.5	1,229	3.3	763	3.6	1.6

*See appendix H: ERA-EDTA coding

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

15.1%). This contrasted with incident patients where diabetes was the predominant diagnostic code in 26.9% of new RRT patients. Younger patients tended to have different PRDs compared to older patients; patients aged less than 65 years were more likely to have GN (21.3%) or diabetes (15.1%) and less likely to have renal vascular disease (1.0%) or hypertension (5.2%) as the cause of their renal failure. Among older patients (≥65 years) uncertain aetiology (19.1%) was the most common cause.

As described in previous years, 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 one 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).

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 number of prevalent patients with diabetes as a primary renal diagnosis increased by 4.5% to 9,456 in 2014, from 9,052 in 2013, representing 16.1% of all prevalent patients (compared with 13.5% in 2006) (table 2.13). The male:female ratio for diabetes as PRD was 1.7. The median age at start of RRT for patients with diabetes

(56 years) was nine years higher than those without diabetes (47 years), although the median age at the end of 2014 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. This is also demonstrated by the lower median time on RRT for patients with diabetes (3.6 years vs. 7.2 years for those without diabetes) and this difference in survival has not changed over the last five years (3.1 years vs. 6.4 years in 2009). The age at starting RRT in those with diabetes 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 diabetes compared to those without. Fifty eight percent of patients with diabetes as primary renal diagnosis were undergoing

Table 2.12. Transplant:dialysis ratios by age and primary renal disease in the prevalent RRT population on 31/12/2014

Primary diagnosis*	Transplant : dialysis ratio	
	<65	≥65
Aetiology uncertain	2.1	0.4
Glomerulonephritis	2.5	0.9
Pyelonephritis	2.9	0.6
Diabetes	0.9	0.1
Polycystic kidney	3.0	1.7
Hypertension	1.4	0.3
Renal vascular disease	0.9	0.1
Other	2.1	0.4
Not sent	1.2	0.2

*See appendix H ERA-EDTA coding

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

Table 2.13. Age relationships in patients with diabetes and patients without diabetes and modality in prevalent RRT patients on 31/12/2014

	Patients with diabetes ^a	Patients without diabetes ^b
N	9,456	47,401
M:F ratio	1.65	1.55
Median age on 31/12/14	61	58
Median age at start of RRT ^{cd}	56	47
Median years on RRT ^d	3.6	7.2
% HD	58	37
% PD	8	6
% transplant	34	57

Excluded centre: $\geq 40\%$ primary renal diagnosis aetiology uncertain (Colchester)

^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

HD compared to just 37% 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 (34% vs. 57%). However, the proportion of patients with diabetes as PRD with a functioning transplant has increased since 2005 when only 26.9% of patients with diabetes had a functioning transplant. For older patients with diabetes (age ≥ 65 years), only 12.9% had a functioning transplant compared with 34.9% of their peers without diabetes (table 2.14). In Northern Ireland, 30.0% of prevalent patients with diabetes had a functioning transplant compared with the UK average of 33.9% (data not shown). A higher proportion of prevalent dialysis patients without diabetes (18.1%) were on home dialysis therapies (home HD and PD) compared with prevalent dialysis patients with diabetes (14.8%).

Modalities of treatment

Transplantation was the most common treatment modality (52.8%) for prevalent RRT patients in 2014, followed closely by centre-based HD (39.0%) in either hospital centre (18.2%) or satellite unit (20.8%) (figure 2.6). Satellite HD was again more prevalent than in-centre, a trend first noted in 2012. Home therapies made up the remaining 8.2% of treatment modalities, largely PD in

Table 2.14. Treatment modalities by age and diabetes status on 31/12/2014

	<65		≥ 65	
	Diabetes ^a	All other causes ^b	Diabetes ^a	All other causes ^b
N	5,638	30,562	3,818	16,839
% HD	44.1	26.0	77.8	57.4
% PD	7.7	4.4	9.4	7.7
% transplant	48.1	69.6	12.9	34.9

Excluded centre with $\geq 40\%$ PRD aetiology uncertain (Colchester)

^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

its different formats (6.2%) which followed a similar pattern in 2012 and 2013. The proportion on continuous ambulatory peritoneal dialysis (CAPD) and automated PD (APD) was 2.7% 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 (65.9%) when compared with patients aged 65 years and over (30.2%) (table 2.15). HD was the principal modality in the older patients (61.7%).

Figure 2.7 shows the distribution of RRT modalities by age group. From the age of 44 years, transplant prevalence declines as HD prevalence increases. The

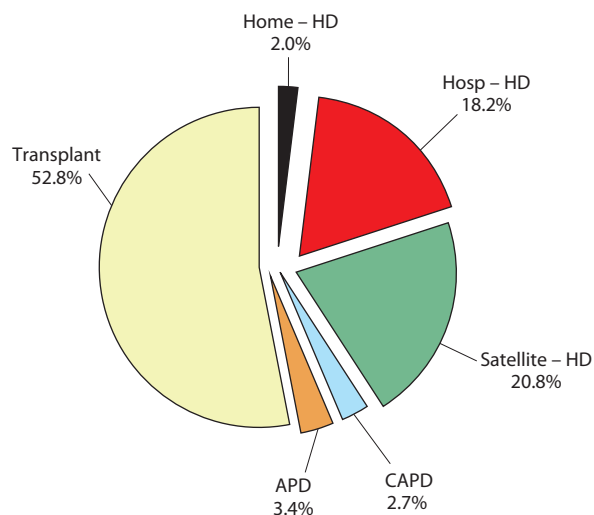


Fig. 2.6. Treatment modality in prevalent RRT patients on 31/12/2014

Table 2.15. Percentage of prevalent RRT patients by dialysis and transplant modality by UK country on 31/12/2014

UK country	<65 years				≥65 years			
	N	% HD	% PD	% transplant	N	% HD	% PD	% transplant
England	31,588	29.5	5.2	65.2	18,251	61.6	8.3	30.1
N Ireland	1,016	23.5	2.7	73.8	592	66.7	5.9	27.4
Scotland	3,151	28.2	3.8	68.0	1,525	63.1	6.2	30.6
Wales	1,709	26.2	5.4	68.4	1,136	58.8	8.8	32.4
UK	37,464	29.1	5.0	65.9	21,504	61.7	8.1	30.2

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 72.5% in Carlisle to 100% in Colchester (table 2.16).

Of the dialysis population, 44.0% received their treatment at a satellite haemodialysis unit in 2014. This figure remains stable compared to last year, but represents an increase from 39.9% in 2010 (data not shown). In 2014, the number of centres that had more than 50% of their haemodialysis activity taking place in satellite units was 26 (figure 2.8). Although there are satellite units in Scotland, the data provided for 2014 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.

There was also wide variation between centres in the proportion of dialysis patients being managed with APD, ranging from 0% to 21% (table 2.16). While in Northern Ireland the majority of PD patients were on APD, across the UK six of the 70 centres with a PD programme did not report having any patients on APD.

Home haemodialysis

In 2014, the percentage of dialysis patients receiving home HD varied from 0% in five centres, to greater than 5% in 24 centres (table 2.16). In the UK, the overall percentage of dialysis patients receiving home haemodialysis increased from 3.4% in 2011 to 4.3% in 2014.

The proportion of dialysis patients receiving home haemodialysis was greatest in Wales at 7.2%, compared with 3.3% in Northern Ireland, 4.3% in England and 2.9% in Scotland (figure 2.8, table 2.16). The proportion on home haemodialysis has increased in each of the four countries except Northern Ireland 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.

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 by centre was measured by assigning the patients to a given centre based on the patient postcode, rather than to the centre returning the data

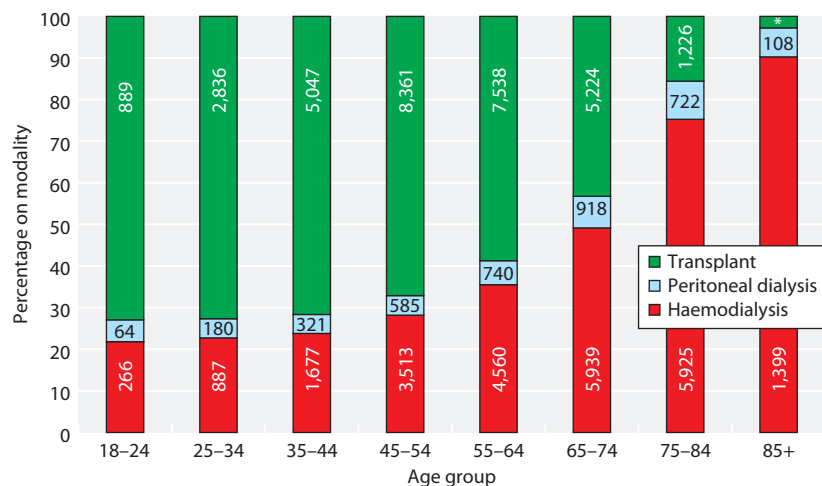


Fig. 2.7. Treatment modality distribution by age in prevalent RRT patients on 31/12/2014
*N = 43

Table 2.16. Percentage of prevalent dialysis patients by dialysis modality and centre on 31/12/2014

Centre	N	% haemodialysis					% peritoneal dialysis	
		Total	Home	Geo-HHD ^c	Hospital	Satellite	CAPD	APD
England								
B Heart	449	92.4	4.0	3.9	81.7	6.7	4.7	2.9
B QEH	1,095	86.9	4.8	4.0	11.7	70.5	4.7	8.4
Basldn	202	86.1	0.0	0.5	82.7	3.5	5.9	7.9
Bradfd	244	91.4	2.5	4.0	74.2	14.8	2.5	6.2
Brightn	495	86.9	10.1	10.7	36.6	40.2	8.9	4.2
Bristol	598	88.8	3.9	2.9	17.4	67.6	5.7	5.5
Camb	398	92.2	5.3	5.0	43.5	43.5	0.0	0.0
Carlisle	102	72.5	0.0	0.0	50.0	22.6	12.8	14.7
Carsh	929	85.4	2.7	2.5	22.0	60.7	3.7	10.6
Chelms	162	83.3	0.6	1.8	82.7	0.0	10.5	4.9
Colchr	119	100.0	0.0	0.0	100.0	0.0	0.0	0.0
Covnt	458	80.1	2.6	2.2	77.5	0.0	19.9	0.0
Derby	326	73.6	10.7	10.5	62.9	0.0	19.0	7.4
Donc	210	87.1	3.8	6.9	43.8	39.5	1.4	11.4
Dorset	329	84.5	1.8	2.7	18.8	63.8	4.3	10.6
Dudley	230	76.5	7.0	8.1	50.0	19.6	17.4	6.1
Exeter	510	81.6	0.8	0.8	10.8	70.0	8.8	9.6
Glouc	254	83.1	1.6	3.6	64.6	16.9	3.2	13.8
Hull	407	81.1	2.5	2.2	38.1	40.5	10.1	8.9
Ipswi	158	80.4	2.5	2.0	65.8	12.0	8.2	11.4
Kent	475	86.1	3.8	4.4	26.3	56.0	11.6	2.3
L Barts	1,195	80.7	1.3	1.3	39.3	40.1	3.4	15.9
L Guys	684	95.6	7.9	3.3	12.6	75.2	1.9	2.5
L Kings	632	85.6	1.7	4.4	17.9	66.0	5.4	9.0
L Rfree	855	83.3	1.9	2.0	2.9	78.5	6.1	10.6
L St.G	357	86.3	1.4	3.1	37.0	47.9	3.9	9.0
L West	1,480	95.7	1.3	1.2	22.1	72.3	2.4	1.9
Leeds	584	89.2	3.3	2.3	17.1	68.8	0.7	10.1
Leic	1,028	88.2	6.6	6.6	17.2	64.4	3.5	8.3
Liv Ain	203	79.8	4.9	6.0	6.4	68.5	3.0	17.2
Liv Roy	430	86.0	7.4	6.7	37.4	41.2	10.5	3.5
M RI	597	86.9	8.4	7.1	27.1	51.4	5.2	7.9
Middlbr	353	95.8	3.7	3.9	27.2	64.9	4.3	0.0
Newc	339	84.7	6.5	6.0	78.2	0.0	1.2	14.2
Norwch	361	90.3	8.3	8.0	48.2	33.8	8.6	0.8
Nottm	449	81.3	7.4	7.8	40.3	33.6	6.7	12.0
Oxford	546	85.0	3.7	2.6	32.4	48.9	3.1	11.9
Plymth	175	78.3	4.0	4.6	72.6	1.7	6.9	14.9
Ports	696	88.6	6.5	6.2	19.4	62.8	11.4	0.0
Prestn	623	90.7	6.1	6.1	21.2	63.4	1.6	7.7
Redng	367	80.1	1.9	3.7	37.3	40.9	13.1	6.5
Salford	499	82.4	3.4	4.5	29.1	49.9	6.6	11.0
Sheff	643	90.4	6.7	6.1	37.2	46.5	9.6	0.0
Shrew	225	85.8	6.7	7.5	49.8	29.3	11.1	3.1
Stevng	515	94.8	5.2	6.0	24.3	65.2	5.2	0.0
Sthend	136	85.3	0.7	0.7	84.6	0.0	14.7	0.0
Stoke	420	80.2	7.9	7.8	46.4	26.0	2.4	12.1
Sund	229	92.1	0.4	0.9	61.1	30.6	3.1	4.8
Truro	170	87.6	5.3	5.3	42.4	40.0	5.9	6.5
Wirral	228	89.9	3.5	3.9	41.2	45.2	0.4	9.7
Wolve	393	79.9	4.8	6.6	37.4	37.7	11.2	6.1
York	172	83.1	6.4	7.0	33.7	43.0	13.4	3.5

Table 2.16. Continued

Centre	N	% haemodialysis					% peritoneal dialysis	
		Total	Home	Geo-HHD ^c	Hospital	Satellite	CAPD	APD
N Ireland								
Antrim	136	90.4	0.7	0.7	89.7	0.0	0.7	8.8
Belfast	219	93.2	5.9	6.0	87.2	0.0	0.9	5.9
Newry	108	85.2	1.9	1.9	83.3	0.0	0.0	14.8
Ulster	103	96.1	3.9	3.8	92.2	0.0	0.0	3.9
West NI	130	89.2	2.3	2.3	86.9	0.0	0.0	10.0
Scotland								
Abrdn	240	88.3	2.5	2.5	85.8	0.0	5.0	6.7
Airdrie	194	95.4	0.0	1.5	95.4	0.0	2.6	2.1
D & Gall	66	74.2	3.0	3.1	71.2	0.0	18.2	7.6
Dundee	202	88.1	2.0	2.1	86.1	0.0	6.9	5.0
Edinb	301	92.4	2.0	2.1	90.4	0.0	2.0	5.7
Glasgw	635	93.2	4.4	4.0	88.8	0.0	1.6	5.2
Inverns	87	81.6	3.5	3.5	78.2	0.0	12.6	5.8
Klmarnk	178	79.2	6.2	5.7	73.0	0.0	1.7	19.1
Krkldy	163	89.6	0.0	0.0	89.6	0.0	0.6	9.8
Wales								
Bangor	99	83.8	13.1	13.1	42.4	28.3	8.1	8.1
Cardff	576	85.9	6.1	6.1	12.9	67.0	9.6	4.3
Clwyd	103	88.3	4.9	4.0	83.5	0.0	5.8	5.8
Swanse	387	86.0	10.3	10.1	43.4	32.3	10.9	3.1
Wrexm	143	79.0	0.7	0.7	65.7	12.6	0.0	21.0
England	23,734	86.6	4.3		33.2	49.2	6.0	7.0
N Ireland^a	696	91.1	3.3		87.8	0.0	0.4	8.3
Scotland^b	2,066	89.6	2.9		86.7	0.0	3.6	6.8
Wales	1,308	85.2	7.2		35.5	42.6	8.5	6.2
UK	27,804	86.9	4.3		38.6	44.0	5.8	7.0

^aNo satellite units in Northern Ireland

^bAll haemodialysis patients in Scotland are shown as receiving treatment at home or in centre as no data were 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

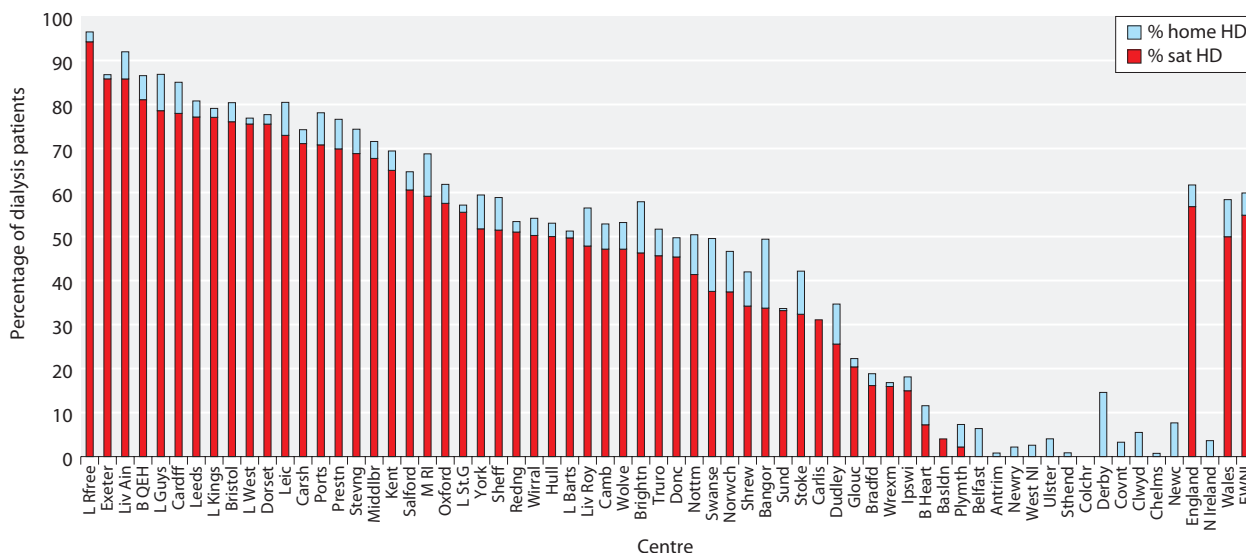


Fig. 2.8. Percentage of prevalent haemodialysis patients treated with satellite or home haemodialysis by centre on 31/12/2014. Scottish centres excluded as information on satellite HD was not available. No centres in Northern Ireland have satellite dialysis units

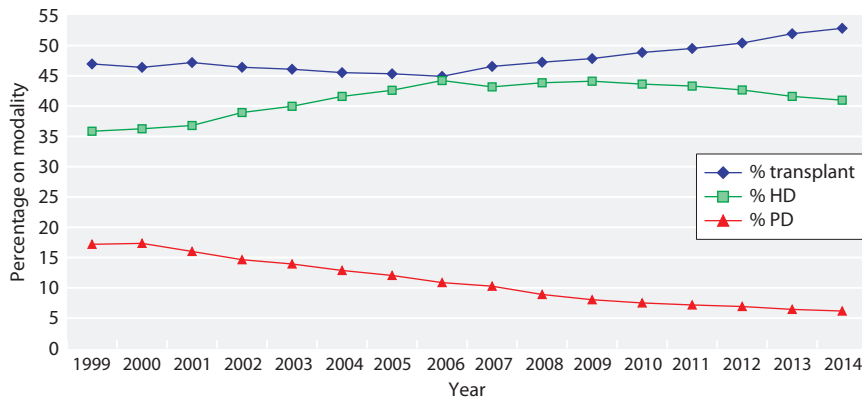


Fig. 2.9. Modality changes in prevalent RRT patients from 1999–2014

to the UKRR (table 2.16 – Geo-HHD). This showed an increase in the prevalence of home HD of >1% for some centres (Bradford, Chelmsford, Doncaster, Dudley, Gloucester, London Kings, London St George’s, Liverpool Aintree, Reading, Salford, Wolverhampton and Airdrie).

Change in modality

The relative proportion of RRT modalities in prevalent patients has changed dramatically over the past 15 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 6.7% over the last 10 years. The absolute number of patients on PD decreased from 5,185 patients in 2004 to 3,638 patients in 2014. Time on PD has decreased over the last five years, from a median of 2.0 years in 2009 to 1.6 years in 2014 probably reflecting increased transplantation rates in this largely younger patient group and reduced technique survival rates. 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 both an increased awareness of complications associated with long PD use and increased rates of transplantation for many patients on PD.

The proportion of patients treated with HD has declined slightly over the last four years from 43.3% to 41.0%. The downward trend seen in the proportion of patients with a functioning transplant has reversed since 2007 and has increased from 52.0% in 2013 to 52.8% in 2014, possibly reflecting continued increases in living organ and non-heart beating donation [2].

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 rates between countries (figure 2.11). Rates in Northern

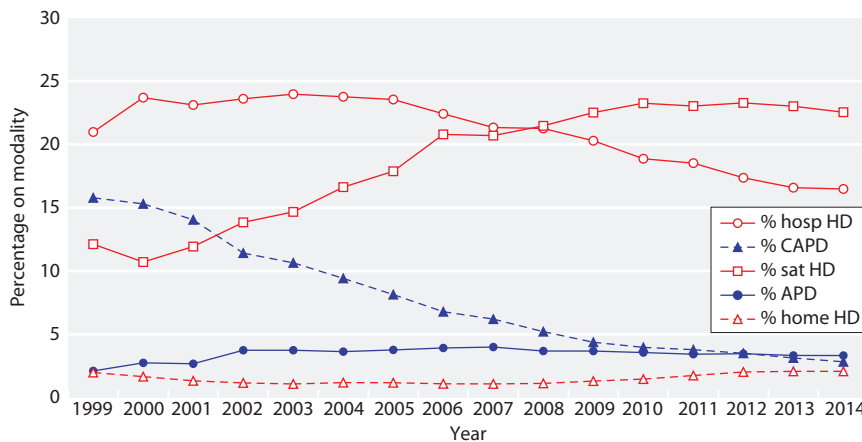


Fig. 2.10. Detailed dialysis modality changes in prevalent RRT patients from 1999–2014. Scottish centres excluded as information on satellite HD was not available

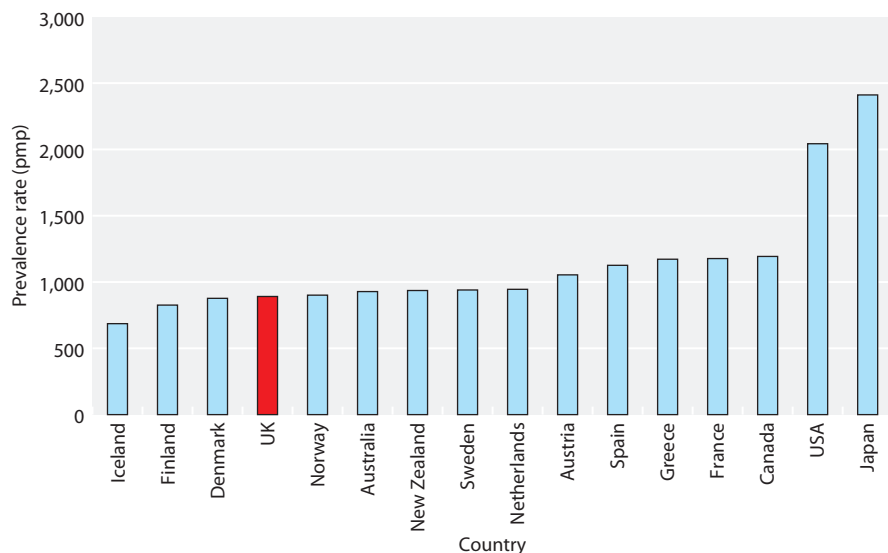


Fig. 2.11. RRT Prevalence rates (pmp) by country in 2013

Non-UK data from USRDS available at http://www.usrds.org/2015/view/v2_13.aspx
 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 22 regions in 2013. Data for Spain include 18 of 19 regions.

European countries (including the UK) are lower than in Southern Europe and these are lower than in the USA. Identifying the source of these differences is complicated by differences in healthcare systems, approaches to conservative care and incidence rates in these countries.

Conclusions

The population of adults undergoing RRT continued to grow across all countries in the UK with an increase of 4% on 2013 UK numbers. Incidence rates of RRT have stabilised in recent years and so this growth in prevalent patients is largely due to improving survival predominantly as a result of increasing transplantation. A similar pattern is seen across Europe [3] and the US [4] although the contribution of transplanted patients is less marked outside the UK.

Whilst half of all patients on RRT continued to be aged 40–64 years, the prevalent population is becoming more elderly with 16.0% of patients being over 75 years old compared to 14.6% in 2009. This applies most dramatically to transplant patients where in 2014 30.2% of over 65 year old patients had a transplant compared to 22.5% in 2009.

The proportion of patients using peritoneal dialysis has been falling since the early 1990's and was at just 6% in 2014. Incidence of PD has levelled off over the last seven years and so ongoing reductions in the prevalence of PD are due to decreasing technique survival (median time on treatment in 2014 1.7 years vs. 2.0 years in 2009). In

most centres the PD population was younger than the HD population. This is in contrast to data from Australia where PD patients were older on average than HD patients [5]. This variation highlights the lack of consensus concerning which patients are potentially best treated with PD.

There are large variations in prevalence rates 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. Survival whilst on RRT may vary between centres because of differences in the clinical care provided as well as differing practices surrounding which patients are offered dialysis and these will also affect the prevalence rate. Access to high quality health care for the comorbid conditions seen in these patients may also influence survival and therefore the prevalence rate.

The percentage of CCG/HB areas with prevalence rates 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 rates. The reorganisations seen in healthcare areas over this same time period make interpretation of this finding more difficult. There remain 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.

Acknowledgement

The non-UK data reported in the section on International comparisons have been supplied by the United States Renal Data System (USRDS). The interpretation

and reporting of these data are the responsibility of the author(s) and in no way should be seen as an official policy or interpretation of the U.S.

Conflicts of interest: the authors declare no conflicts of interest

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