

SECTION H VASCULAR ACCESS FOR HAEMODIALYSIS

Details of vascular access used for haemodialysis for all hospital and home haemodialysis patients were collected during the SRR census week in May 2015. The SRR has collected data about the access used for first haemodialysis for incident patients since the start of 2012.

The Renal Association guideline suggests that 65% of all incident adult haemodialysis patients should commence dialysis with an arteriovenous (AV) fistula and that 85% of established patients should have AV access.

In 2014 there were 437 incident adult haemodialysis in Scotland. 193 (44.2%) of these commenced dialysis with an AVF and 244 (55.8%) with a central venous cannula (CVC).

Between the 01 January 2015 and 30 June 2015 there were 211 incident adult haemodialysis patients. 94 (44.6%) patients commenced with AV access and 117 (55.4%) with a CVC.

6 paediatric patients started HD in total at RHSC and all commenced HD with a CVC.

There are no missing data.

H1 Types of vascular access used for first haemodialysis 2012 to June 2015											
Year	No. starting HD	No. with data	Arteriovenous					Central Venous Catheter			
			Fistula	Graft	Not known	Total		TCVC**	NTCVC***	Total	
						n	%			n	%
2012	423	423	178	3	0	181	42.8	161	81	242	57.2
2013	402	402	173	7	0	180	44.8	147	75	222	55.2
2014	437	437	184	9	0	193	44.2	159	86	244	55.8
2015*	211	211	90	4	0	94	44.5	68	49	117	55.5

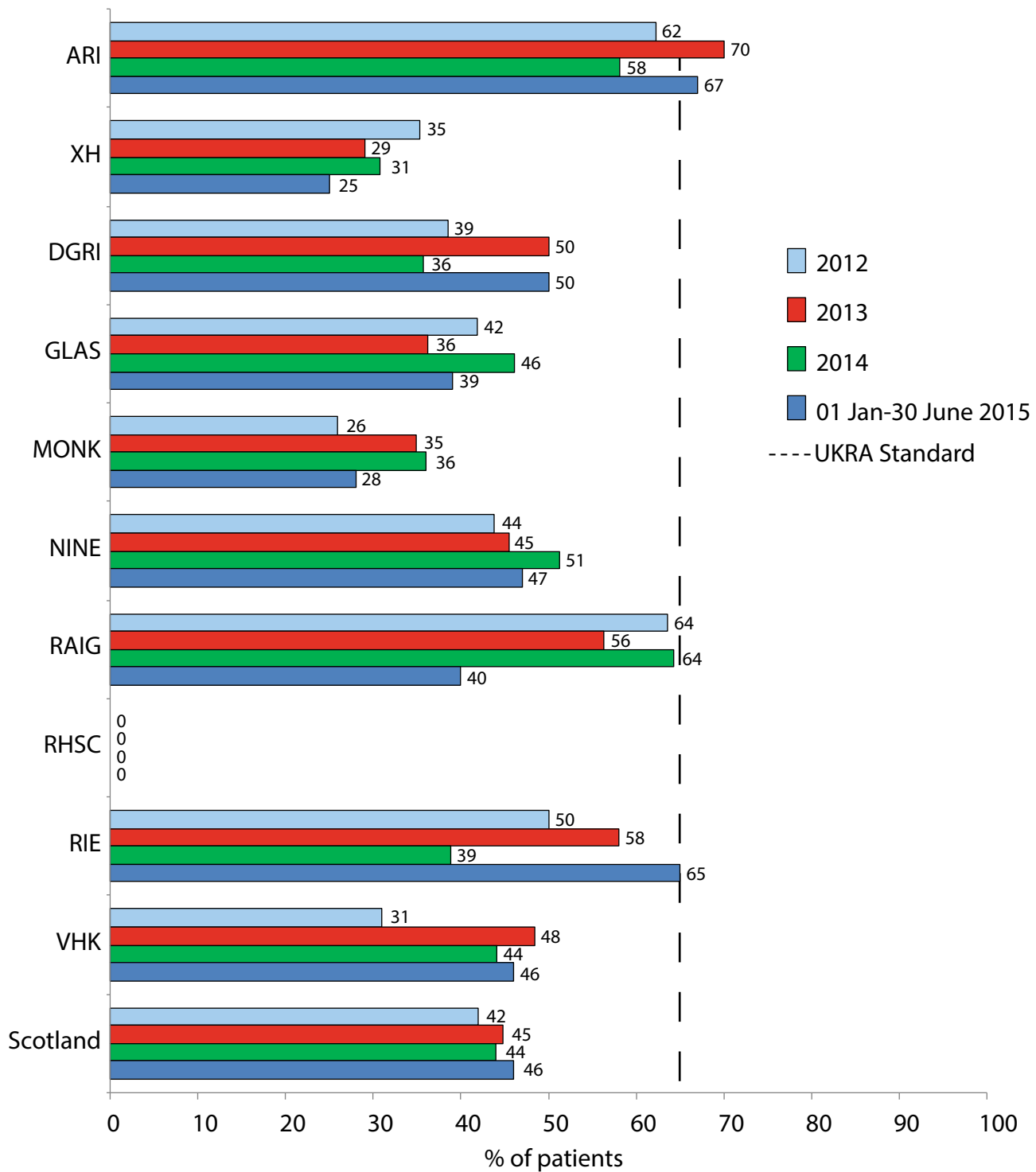
* 01 January - 30 June 2015.

** TCVC: Tunnelled central venous cannula

*** NTCVC: Non tunnelled central venous cannula

Analysis of access of incident patients by age, sex and primary renal diagnosis showed no significant differences.

H2 Percentage of patients with AV access for first haemodialysis by renal unit 01 January 2012 - 30 June 2015



H3 Types of vascular access for haemodialysis patients each May 2009-2015												
Year	No. on HD	No. with data		Arteriovenous					Central Venous Catheter			
		n	%	Fistula	Graft	Not known	Total		TCVC**	NTCVC***	Total	
							n	%			n	%
2009	1848	1699	91.9	1206	58	16	1280	75.3	385	34	419	24.7
2010	1868	1748	93.6	1262	51	2	1315	75.2	400	33	433	24.8
2011	1877	1810	96.4	1275	54	40	1369	75.6	405	36	441	24.4
2012	1873	1769	94.4	1284	72	10	1366	77.2	379	24	403	22.8
2013	1885	1680	89.1	1217	69	0	1286	76.5	343	51	394	23.5
2014	1853	1803	97.3	1256	76	4	1336	74.1	437	30	467	25.9
2015*	1906	1831	96.1	1236	79	0	1315	71.8	482	34	516	28.2

* 01 January - 30 June 2015.

** TCVC: Tunnelled central venous cannula

*** NTCVC: Non tunnelled central venous cannula

1906 patients with established renal failure were being treated by haemodialysis in May 2015, details of vascular access were available for 1831 (96.1%).

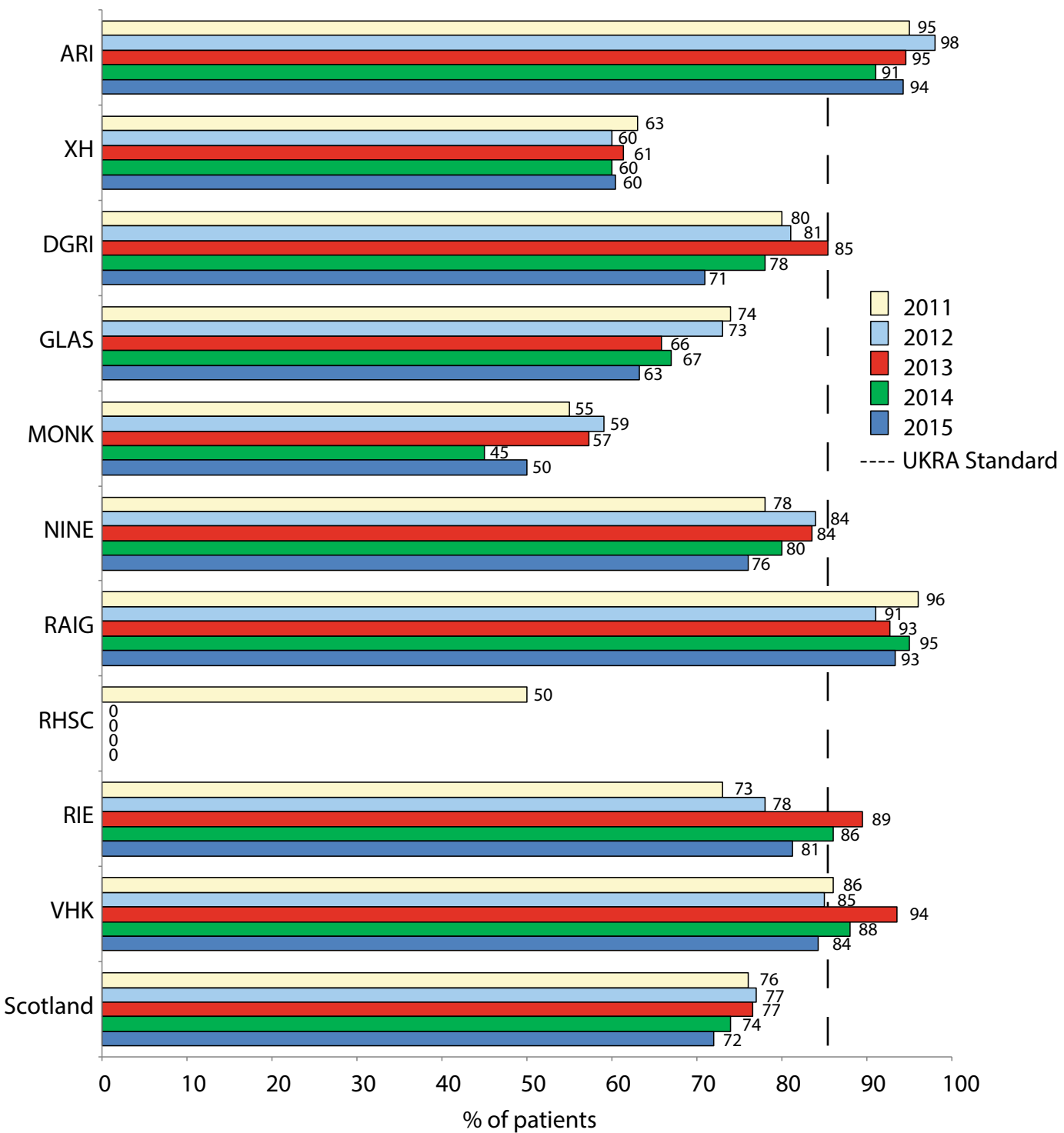
As in previous years, in 2015 males were significantly more likely than females to be using AV access (77% v 66%; $p < 0.001$).

Age did not affect vascular access, there was no significant difference in prevalence of AV access between the age quartiles.

There were significant differences between diagnostic groups, patients with diabetic nephropathy being the least likely to have AV access ($p < 0.001$).

There were large, significant differences between renal units. Figure H4 shows the percentage of AV access in each unit for 2011-2015.

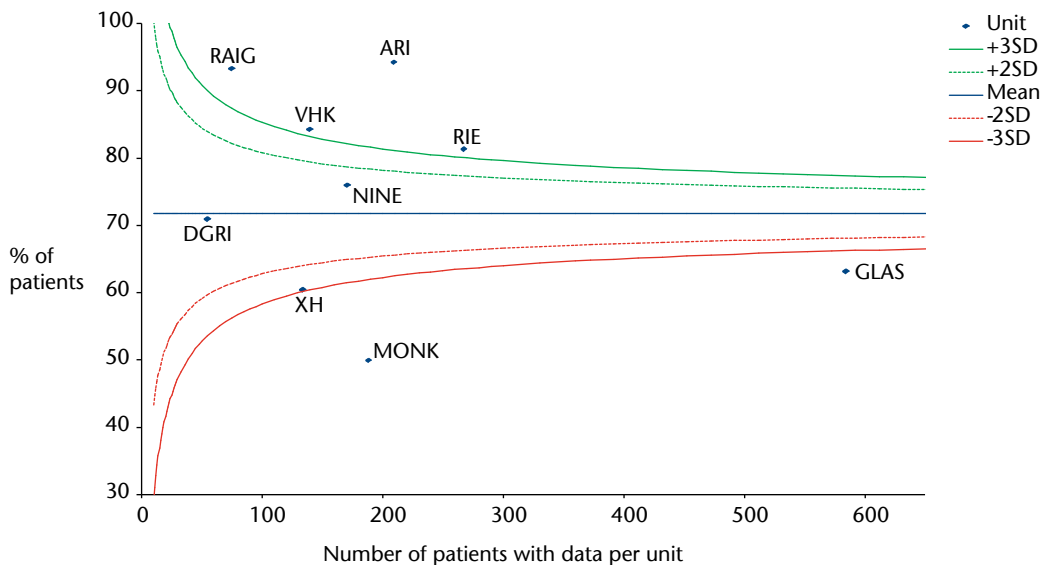
H4 Percentage of haemodialysis patients with AV access by renal unit: Census results 2011 - 2015



Rates of AV access (for patients with data submitted) in the adult units in May 2015 ranged from 50% to 94% (Chi square $p < 0.001$).

The Renal Association guideline suggests that 85% of all prevalent adult patients on haemodialysis should receive dialysis via a functioning arteriovenous fistula.

H5 Percentage of patients on hospital haemodialysis with AV access by renal unit May 2015



RHSC had no patients with AV access and is not shown on the funnel plot.

Of the 56 patients receiving home haemodialysis during the census, information on vascular access was available for 51 (91.1%). Of those with data, 46 patients were receiving dialysis via AV fistula or graft (90.2%) and 5 via a central venous cannula (9.8%).

Patients who had been on dialysis for less than a year were significantly less likely to be using AV access than those who had been on dialysis for longer (59% v 78%; $p < 0.001$).

Patients who had been on dialysis for more than one but less than two years, were not significantly less likely to have AV access than those who had been on dialysis for more than two years.