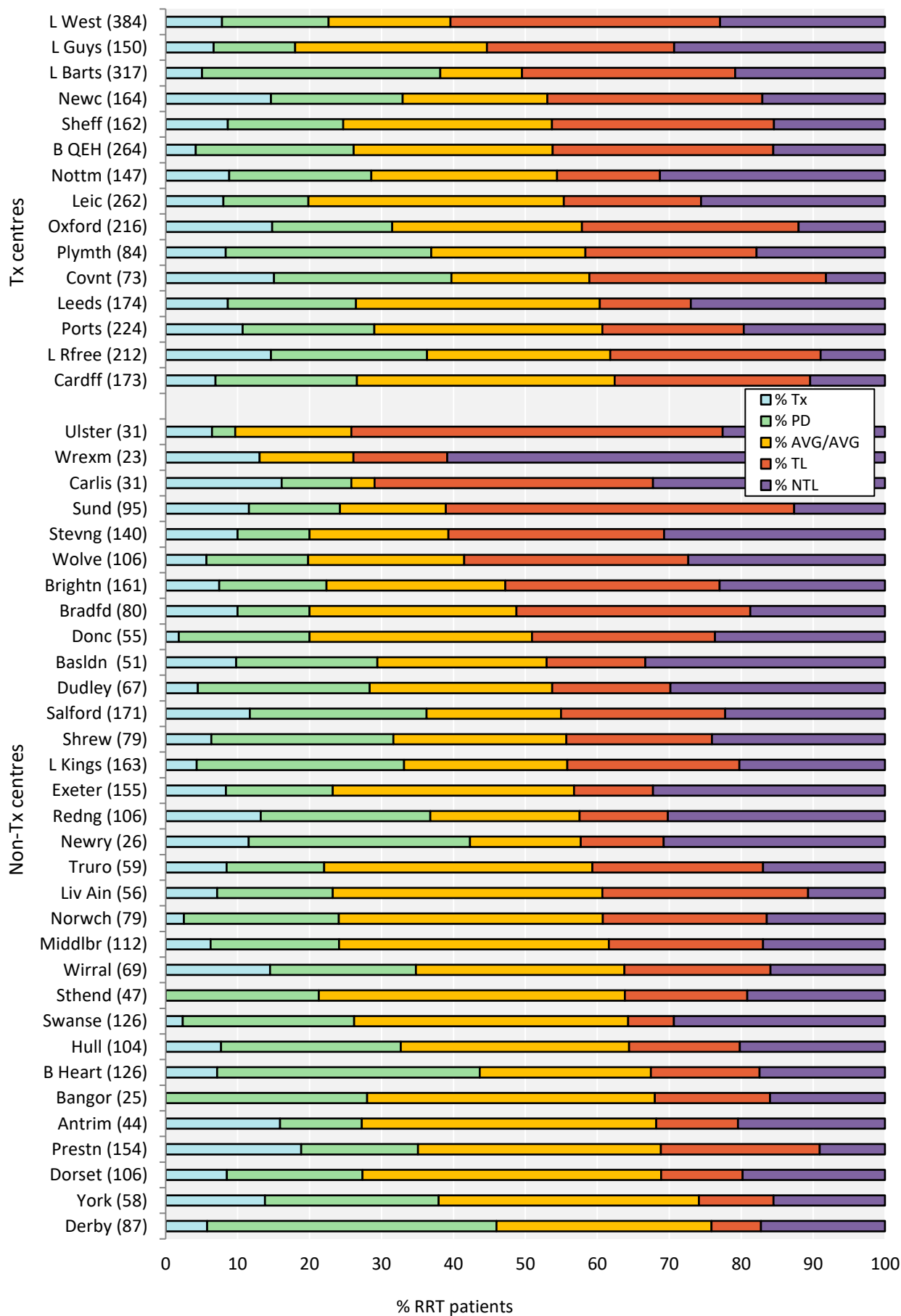


## **Addendum: UK Renal Registry 21st Annual Report**

### **Chapter 1 Adults starting renal replacement therapy (RRT) for end-stage kidney disease (ESKD) in the UK in 2017**

The following analyses related to dialysis access in incident adult dialysis patients were adjusted to include Swansea and Basildon renal centres for 2017.



**Figure 1.15** First dialysis access used for adult patients incident to RRT in 2017 by centre (2017 Multisite Dialysis Access Audit)  
 Number of incident patients on RRT in a centre in brackets (centres with <70% access data for the incident RRT population are excluded)  
 Centres are ordered by decreasing use of lines  
 AVF – arteriovenous fistula; AVG – arteriovenous graft; NTL – non-tunnelled line; TL – tunnelled line

**Table 1.15** Start modality and dialysis access used for adult patients incident to dialysis in 2017 by presentation and surgical assessment time before start of dialysis by centre (2017 Multisite Dialysis Access Audit)

Centre	Early presenters (≥ 90 days) (%)					Late presenters (<90 days) (%)					Early surgical assessment (≥ 90 days) (%)		Start modality (%)		
	N	PD	AVF/ AVG	TL	NTL	N	PD	AVF/ AVG	TL	NTL	Yes	No	HD	PD	Tx
Antrim	34	14.7	52.9	14.7	17.6	3	0.0	0.0	0.0	100.0	86.5	13.5	72.7	11.4	15.9
B Heart	111	38.7	26.1	15.3	19.8	6	50.0	16.7	33.3	0.0	76.9	23.1	56.3	36.5	7.1
B QEH	177	29.9	40.1	26.0	4.0	76	6.6	2.6	46.1	44.7	62.5	37.5	73.9	22.0	4.2
Bangor	22	27.3	45.5	18.2	9.1	3	33.3	0.0	0.0	66.7	80.0	20.0	72.0	28.0	0.0
Basldn	32	25.0	37.5	12.5	25.0	14	14.3	0.0	21.4	64.3	41.3	58.7	70.6	19.6	9.8
Bradfd	65	12.3	35.4	36.9	15.4	7	0.0	0.0	28.6	71.4	61.1	38.9	80.0	10.0	10.0
Brightn	102	22.5	37.3	30.4	9.8	47	2.1	4.3	36.2	57.4	40.3	59.7	77.6	14.9	7.5
Camb	48	10.4	50.0	39.6	0.0	25	8.0	0.0	88.0	4.0	45.7	54.3			
Cardff	144	22.9	43.1	26.4	7.6	14	7.1	0.0	50.0	42.9	68.9	31.1	73.4	19.7	6.9
Carlis	18	16.7	5.6	61.1	16.7	8	0.0	0.0	12.5	87.5	36.4	63.6	74.2	9.7	16.1
Covnt	40	42.5	15.0	27.5	15.0	3	33.3	33.3	33.3	0.0	70.9	29.1	60.3	24.7	15.1
Derby	71	46.5	33.8	5.6	14.1	11	18.2	18.2	18.2	45.5	34.6	65.4	54.0	40.2	5.7
Donc	44	22.7	38.6	27.3	11.4	10	0.0	0.0	20.0	80.0	50.0	50.0	80.0	18.2	1.8
Dorset	74	23.0	59.5	8.1	9.5	23	13.0	0.0	26.1	60.9	48.5	51.5	72.6	18.9	8.5
Dudley	52	28.8	28.8	21.2	21.2	12	8.3	16.7	0.0	75.0	40.3	59.7	71.6	23.9	4.5
Exeter	111	20.7	46.8	10.8	21.6	22	0.0	0.0	22.7	77.3	25.4	74.6	76.8	14.8	8.4
Hull	74	33.8	41.9	17.6	6.8	22	4.5	9.1	13.6	72.7	56.8	43.2	67.3	25.0	7.7
L Guys	119	14.3	33.6	28.6	23.5	18	0.0	0.0	27.8	72.2	53.6	46.4	82.0	11.3	6.7
L Kings	133	32.3	27.8	23.3	16.5	22	18.2	0.0	36.4	45.5	56.8	43.2	66.9	28.8	4.3
L Rfree	162	28.4	33.3	30.9	7.4	18	0.0	0.0	61.1	38.9	56.9	43.1	63.7	21.7	14.6
L St.G	46	34.8	23.9	10.9	30.4	25	0.0	8.0	16.0	76.0	50.0	50.0			
L West	287	19.5	22.3	40.4	17.8	64	1.6	1.6	42.2	54.7	57.1	42.9	77.3	14.8	7.8
Leeds	140	20.7	42.1	12.1	25.0	19	10.5	0.0	26.3	63.2	52.2	47.8	73.6	17.8	8.6
Leic	196	15.8	45.4	18.4	20.4	44	0.0	9.1	31.8	59.1			80.2	11.8	8.0
Liv Ain	46	19.6	45.7	26.1	8.7	6	0.0	0.0	66.7	33.3	61.2	38.8	76.8	16.1	7.1
Middlbr	83	21.7	48.2	18.1	12.0	22	9.1	9.1	40.9	40.9	49.4	50.6	75.9	17.9	6.3
Newc	97	27.8	34.0	24.7	13.4	43	7.0	0.0	58.1	34.9	47.9	52.1	67.1	18.3	14.6
Newry	19	42.1	21.1	15.8	21.1	3	0.0	0.0	0.0	100.0	43.5	56.5	57.7	30.8	11.5
Norwch	61	27.9	47.5	13.1	11.5	16	0.0	0.0	62.5	37.5			75.9	21.5	2.5
Nottm	100	27.0	37.0	18.0	18.0	34	5.9	2.9	8.8	82.4	33.6	66.4	71.4	19.7	8.8
Oxford	143	23.1	37.8	29.4	9.8	39	2.6	7.7	59.0	30.8	49.7	50.3	68.5	16.7	14.8
Plymth	61	36.1	29.5	21.3	13.1	10	20.0	0.0	40.0	40.0	0.0	100.0	63.1	28.6	8.3
Ports	151	23.8	43.0	18.5	14.6	41	12.2	12.2	36.6	39.0			71.0	18.3	10.7
Prestn	101	19.8	50.5	21.8	7.9	23	21.7	4.3	47.8	26.1	56.5	43.5	64.9	16.2	18.8
Redng	67	29.9	32.8	13.4	23.9	20	20.0	0.0	10.0	70.0	24.4	75.6	63.2	23.6	13.2
Salford	119	31.1	25.2	24.4	19.3	28	17.9	3.6	32.1	46.4	56.7	43.3	63.7	24.6	11.7
Sheff	120	20.8	38.3	32.5	8.3	27	3.7	3.7	40.7	51.9	61.5	38.5	75.3	16.0	8.6
Shrew	52	34.6	36.5	19.2	9.6	22	9.1	0.0	27.3	63.6	64.9	35.1	68.4	25.3	6.3
Stevng	80	16.3	33.8	36.3	13.8	42	2.4	0.0	26.2	71.4	39.7	60.3	80.0	10.0	10.0
Sthend	42	23.8	45.2	16.7	14.3	4	0.0	0.0	25.0	75.0	46.8	53.2	78.7	21.3	0.0
Sund	69	17.4	18.8	55.1	8.7	15	0.0	6.7	53.3	40.0	32.1	67.9	75.8	12.6	11.6
Swanse	101	27.7	47.5	5.9	18.8	22	9.1	0.0	9.1	81.8	32.5	67.5	73.8	23.8	2.4
Truro	38	18.4	57.9	18.4	5.3	16	6.3	0.0	43.8	50.0	61.1	38.9	78.0	13.6	8.5
Ulster	23	4.3	21.7	60.9	13.0	6	0.0	0.0	33.3	66.7	48.3	51.7	90.3	3.2	6.5
West NI	7	14.3	57.1	14.3	14.3	2	0.0	0.0	50.0	50.0	44.4	55.6	47.1	5.9	47.1
Wirral	51	27.5	39.2	23.5	9.8	7	0.0	0.0	28.6	71.4	39.0	61.0	65.2	20.3	14.5
Wolve	78	19.2	29.5	32.1	19.2	14	0.0	0.0	42.9	57.1	41.7	58.3	80.2	14.2	5.7
Wrexm	10	0.0	30.0	10.0	60.0	7	0.0	0.0	14.3	85.7	30.0	70.0	87.0	0.0	13.0
York	41	26.8	51.2	9.8	12.2	9	33.3	0.0	22.2	44.4	60.0	40.0	62.1	24.1	13.8
<b>Total</b>	<b>4,062</b>	<b>24.5</b>	<b>37.0</b>	<b>24.0</b>	<b>14.6</b>	<b>994</b>	<b>6.9</b>	<b>3.4</b>	<b>35.8</b>	<b>53.8</b>	<b>49.2</b>	<b>50.8</b>	<b>71.9</b>	<b>19.0</b>	<b>9.1</b>

Blank cells – no data returned by the centre or data completeness <70%

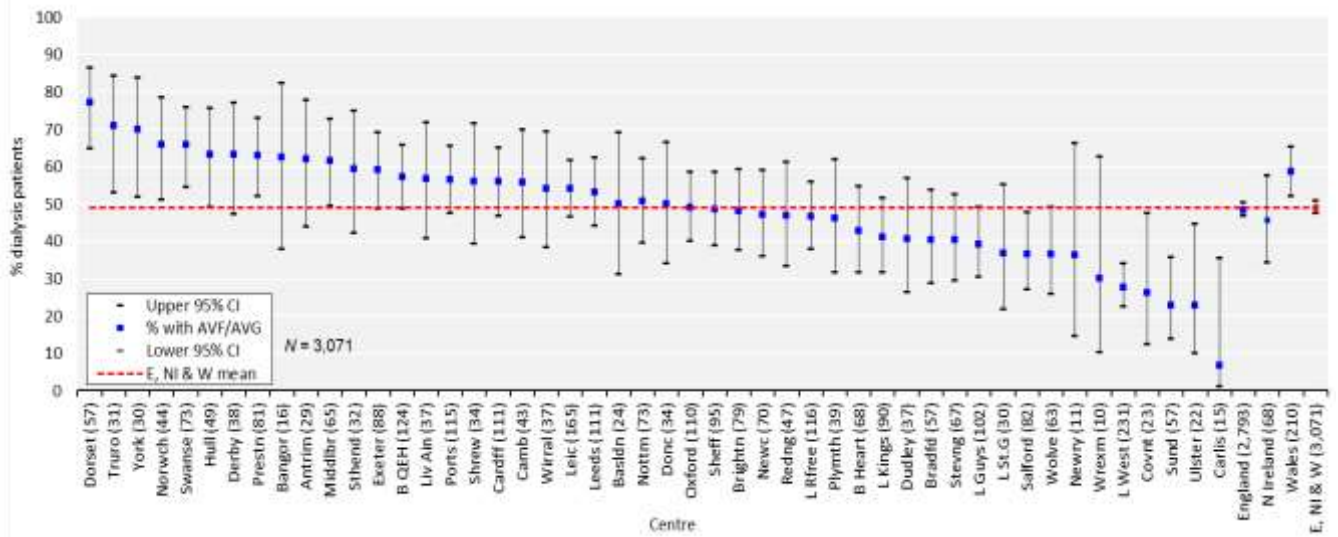
Centres with <70% access data, time of referral or assessment data for the incident RRT population are excluded

AVF – arteriovenous fistula; AVG – arteriovenous graft; NTL – non-tunnelled line; TL – tunnelled line

**Table 1.16** Dialysis access used by adult patients incident to dialysis in 2017 at 3 months after start of RRT by presentation time and by centre (2017 Multisite Dialysis Access Audit)

Centre	Early presenters (≥ 90 days) (%)							Late presenters (<90 days) (%)							All patients 3 months after RRT start (%)							
	N	Tx	PD	AVF/ AVG	TL	NL	Other	N	Tx	PD	AVF/ AVG	TL	NL	Other	Missing	Tx	PD	AVF/ AVG	TL	NL	Other	Missing
Antrim	34	2.9	14.7	47.1	23.5	2.9	8.8	3	0.0	0.0	0.0	33.3	66.7	0.0	0.0	2.7	13.5	43.2	24.3	8.1	8.1	0.0
B Heart	111	0.0	41.4	31.5	20.7	0.0	6.3	6	0.0	50.0	16.7	33.3	0.0	0.0	0.0	0.0	41.9	30.8	21.4	0.0	6.0	0.0
B QEH	177	0.6	29.4	40.1	26.0	0.0	4.0	76	0.0	11.8	3.9	44.7	0.0	39.5	0.0	0.4	24.9	30.2	32.7	0.0	11.8	0.0
Bangor	22	9.1	22.7	31.8	31.8	0.0	4.5	3	0.0	33.3	0.0	66.7	0.0	0.0	0.0	8.0	24.0	28.0	36.0	0.0	4.0	0.0
BasIdn	32	0.0	25.0	34.4	37.5	0.0	3.1	14	0.0	14.3	0.0	50.0	0.0	35.7	0.0	0.0	21.7	23.9	41.3	0.0	13.0	0.0
Bradfd	65	1.5	9.2	41.5	44.6	0.0	3.1	7	0.0	0.0	0.0	85.7	0.0	14.3	0.0	1.4	8.3	37.5	48.6	0.0	4.2	0.0
Brightn	102	1.0	21.6	37.3	26.5	0.0	13.7	47	2.1	2.1	8.5	48.9	0.0	38.3	0.0	1.3	15.4	28.2	33.6	0.0	21.5	0.0
Camb	48	2.1	8.3	47.9	31.3	0.0	10.4	25	0.0	4.0	0.0	80.0	0.0	16.0	0.0	1.1	5.3	31.9	51.1	0.0	10.6	0.0
Cardff	144	0.7	22.2	47.9	25.7	0.7	2.8	14	0.0	7.1	14.3	71.4	7.1	0.0	0.0	0.6	20.5	44.1	31.1	1.2	2.5	0.0
Carlis	18	0.0	16.7	16.7	50.0	11.1	5.6	8	0.0	0.0	12.5	12.5	37.5	37.5	0.0	0.0	11.5	15.4	38.5	19.2	15.4	0.0
Covnt	40	2.5	37.5	12.5	42.5	2.5	2.5	3	0.0	33.3	33.3	33.3	0.0	0.0	0.0	1.6	25.8	21.0	48.4	1.6	1.6	0.0
Derby	71	2.8	45.1	39.4	9.9	0.0	2.8	11	0.0	18.2	27.3	45.5	0.0	9.1	0.0	2.4	41.5	37.8	14.6	0.0	3.7	0.0
Donc	44	2.3	22.7	31.8	34.1	2.3	6.8	10	0.0	10.0	0.0	50.0	0.0	40.0	0.0	1.9	20.4	25.9	37.0	1.9	13.0	0.0
Dorset	74	4.1	17.6	54.1	13.5	1.4	9.5	23	0.0	13.0	4.3	52.2	4.3	26.1	0.0	3.1	16.5	42.3	22.7	2.1	13.4	0.0
Dudley	52	0.0	32.7	28.8	32.7	0.0	5.8	12	0.0	8.3	16.7	50.0	0.0	25.0	0.0	0.0	28.1	26.6	35.9	0.0	9.4	0.0
Exeter	111	0.0	21.6	44.1	22.5	0.9	10.8	22	0.0	0.0	27.3	22.7	0.0	50.0	0.0	0.0	17.6	38.7	22.5	0.7	20.4	0.0
Hull	74	0.0	28.4	37.8	28.4	0.0	5.4	22	4.5	4.5	9.1	81.8	0.0	0.0	0.0	1.0	22.9	31.3	40.6	0.0	4.2	0.0
L Guys	119	3.4	14.3	37.0	40.3	0.0	5.0	18	0.0	0.0	5.6	88.9	0.0	5.6	0.0	2.9	12.5	33.1	49.3	0.0	2.2	0.0
L Kings	133	2.3	32.3	27.1	36.8	0.0	1.5	22	0.0	27.3	0.0	72.7	0.0	0.0	0.0	1.9	31.4	23.1	42.3	0.0	1.3	0.0
L Rfree	162	1.9	28.4	33.3	33.3	0.0	3.1	18	0.0	0.0	5.6	94.4	0.0	0.0	0.0	1.7	25.6	30.6	39.4	0.0	2.8	0.0
L St.G	46	2.2	34.8	26.1	28.3	6.5	2.2	25	0.0	4.0	12.0	48.0	8.0	28.0	0.0	1.4	23.6	22.2	36.1	8.3	8.3	0.0
L West	287	0.3	19.2	22.0	55.7	0.0	2.8	64	0.0	1.6	1.6	90.6	0.0	6.3	0.0	0.3	15.8	18.1	62.1	0.0	3.7	0.0
Leeds	140	3.6	20.7	40.0	31.4	0.7	3.6	19	5.3	26.3	5.3	63.2	0.0	0.0	0.0	3.8	21.4	35.8	35.2	0.6	3.1	0.0
Leic	196	1.5	15.8	41.8	32.1	0.5	8.2	44	0.0	0.0	4.5	72.7	0.0	22.7	0.0	1.3	12.9	35.0	40.0	0.4	10.4	0.0
Liv Ain	46	0.0	19.6	39.1	37.0	2.2	2.2	6	0.0	0.0	0.0	83.3	0.0	0.0	16.7	0.0	17.3	34.6	42.3	1.9	1.9	1.9
Middlbr	83	2.4	18.1	48.2	27.7	0.0	3.6	22	0.0	13.6	4.5	81.8	0.0	0.0	0.0	1.9	17.1	39.0	39.0	0.0	2.9	0.0
Newc	97	1.0	27.8	30.9	24.7	1.0	14.4	43	2.3	9.3	0.0	34.9	2.3	51.2	0.0	1.4	22.1	21.4	27.9	1.4	25.7	0.0
Newry	19	0.0	42.1	21.1	26.3	0.0	10.5	3	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	34.8	17.4	39.1	0.0	8.7	0.0
Norwch	61	0.0	27.9	45.9	21.3	0.0	4.9	16	0.0	0.0	12.5	50.0	18.8	18.8	0.0	0.0	22.1	39.0	27.3	3.9	7.8	0.0
Nottm	100	0.0	27.0	40.0	28.0	1.0	4.0	34	0.0	8.8	5.9	29.4	2.9	52.9	0.0	0.0	22.4	31.3	28.4	1.5	16.4	0.0
Oxford	143	6.3	18.2	34.3	35.0	0.0	6.3	39	0.0	2.6	7.7	69.2	0.0	20.5	0.0	5.0	16.0	28.7	42.5	0.0	7.7	0.0
Plymth	61	1.6	31.1	34.4	26.2	1.6	4.9	10	0.0	30.0	30.0	30.0	0.0	10.0	0.0	1.3	28.6	31.2	31.2	1.3	6.5	0.0
Ports	151	1.3	23.8	38.4	23.8	0.7	11.9	41	0.0	9.8	9.8	56.1	2.4	22.0	0.0	1.0	20.0	31.5	30.5	1.0	16.0	0.0
Prestn	101	5.0	14.9	48.5	26.7	0.0	5.0	23	0.0	21.7	4.3	56.5	0.0	17.4	0.0	4.0	16.1	40.3	33.1	0.0	6.5	0.0
Redng	67	1.5	26.9	32.8	32.8	0.0	6.0	20	0.0	20.0	0.0	55.0	0.0	25.0	0.0	1.1	24.2	24.2	41.8	0.0	8.8	0.0
Salford	119	0.0	35.3	26.9	26.9	0.0	10.9	28	0.0	32.1	0.0	53.6	0.0	14.3	0.0	0.0	34.9	21.5	33.6	0.0	10.1	0.0
Sheff	120	2.5	17.5	38.3	36.7	0.0	5.0	27	0.0	3.7	0.0	85.2	0.0	11.1	0.0	2.0	14.9	31.1	45.3	0.0	6.8	0.0
Shrew	52	0.0	28.8	40.4	19.2	0.0	11.5	22	0.0	13.6	0.0	40.9	0.0	45.5	0.0	0.0	24.3	28.4	25.7	0.0	21.6	0.0
Stevng	80	3.8	16.3	35.0	40.0	0.0	5.0	42	0.0	7.1	4.8	42.9	0.0	45.2	0.0	2.4	12.7	23.8	41.3	0.0	19.8	0.0
Sthend	42	2.4	26.2	40.5	26.2	0.0	4.8	4	0.0	25.0	0.0	75.0	0.0	0.0	0.0	2.2	26.1	37.0	30.4	0.0	4.3	0.0
Sund	69	1.4	14.5	20.3	59.4	1.4	2.9	15	0.0	0.0	13.3	86.7	0.0	0.0	0.0	1.2	11.9	19.0	64.3	1.2	2.4	0.0
Swanse	101	0.0	28.7	48.5	18.8	1.0	3.0	22	0.0	13.6	0.0	77.3	0.0	9.1	0.0	0.0	26.0	39.8	29.3	0.8	4.1	0.0
Truro	38	2.6	13.2	50.0	23.7	0.0	10.5	16	0.0	0.0	6.3	62.5	0.0	31.3	0.0	1.9	9.3	37.0	35.2	0.0	16.7	0.0
Ulster	23	4.3	4.3	17.4	69.6	0.0	4.3	6	0.0	0.0	0.0	50.0	0.0	50.0	0.0	3.4	3.4	13.8	65.5	0.0	13.8	0.0
West NI	7	0.0	14.3	57.1	14.3	0.0	14.3	2	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	11.1	44.4	33.3	0.0	11.1	0.0
Wirral	51	2.0	19.6	29.4	37.3	0.0	11.8	7	0.0	0.0	0.0	71.4	0.0	28.6	0.0	1.7	16.9	25.4	42.4	0.0	13.6	0.0
Wolve	78	0.0	15.4	38.5	30.8	2.6	12.8	14	0.0	7.1	0.0	42.9	0.0	50.0	0.0	0.0	13.3	30.6	33.7	2.0	20.4	0.0
Wrexm	10	0.0	0.0	30.0	40.0	0.0	30.0	7	0.0	0.0	0.0	14.3	0.0	85.7	0.0	0.0	0.0	15.0	30.0	0.0	55.0	0.0
York	41	0.0	26.8	48.8	19.5	2.4	2.4	9	0.0	33.3	0.0	55.6	11.1	0.0	0.0	0.0	28.0	40.0	26.0	4.0	2.0	0.0
<b>Total</b>	<b>4,062</b>	<b>1.7</b>	<b>22.4</b>	<b>35.7</b>	<b>31.3</b>	<b>0.9</b>	<b>8.0</b>	<b>994</b>	<b>0.3</b>	<b>10.5</b>	<b>6.2</b>	<b>60.1</b>	<b>3.2</b>	<b>18.9</b>	<b>0.8</b>	<b>1.4</b>	<b>20.3</b>	<b>30.3</b>	<b>37.7</b>	<b>0.8</b>	<b>9.5</b>	<b>0.0</b>

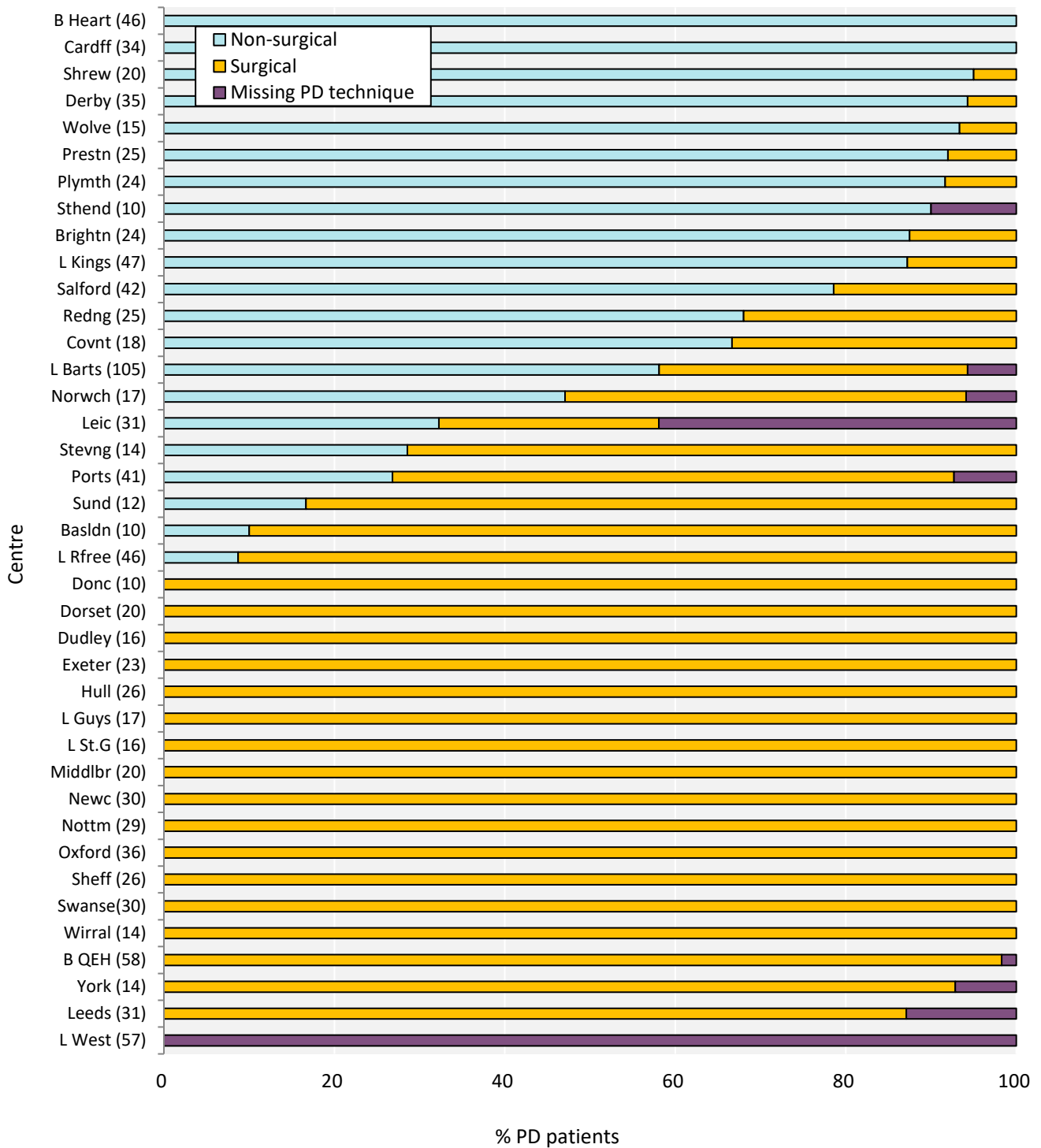
AVF – arteriovenous fistula; AVG – arteriovenous graft; NTL – non-tunnelled line; TL – tunnelled line



**Figure 1.16** Percentage of adult patients incident to dialysis in 2017 who started dialysis using either an arteriovenous fistula (AVF) or an arteriovenous graft (AVG) by centre\* (2017 Multisite Dialysis Access Audit)

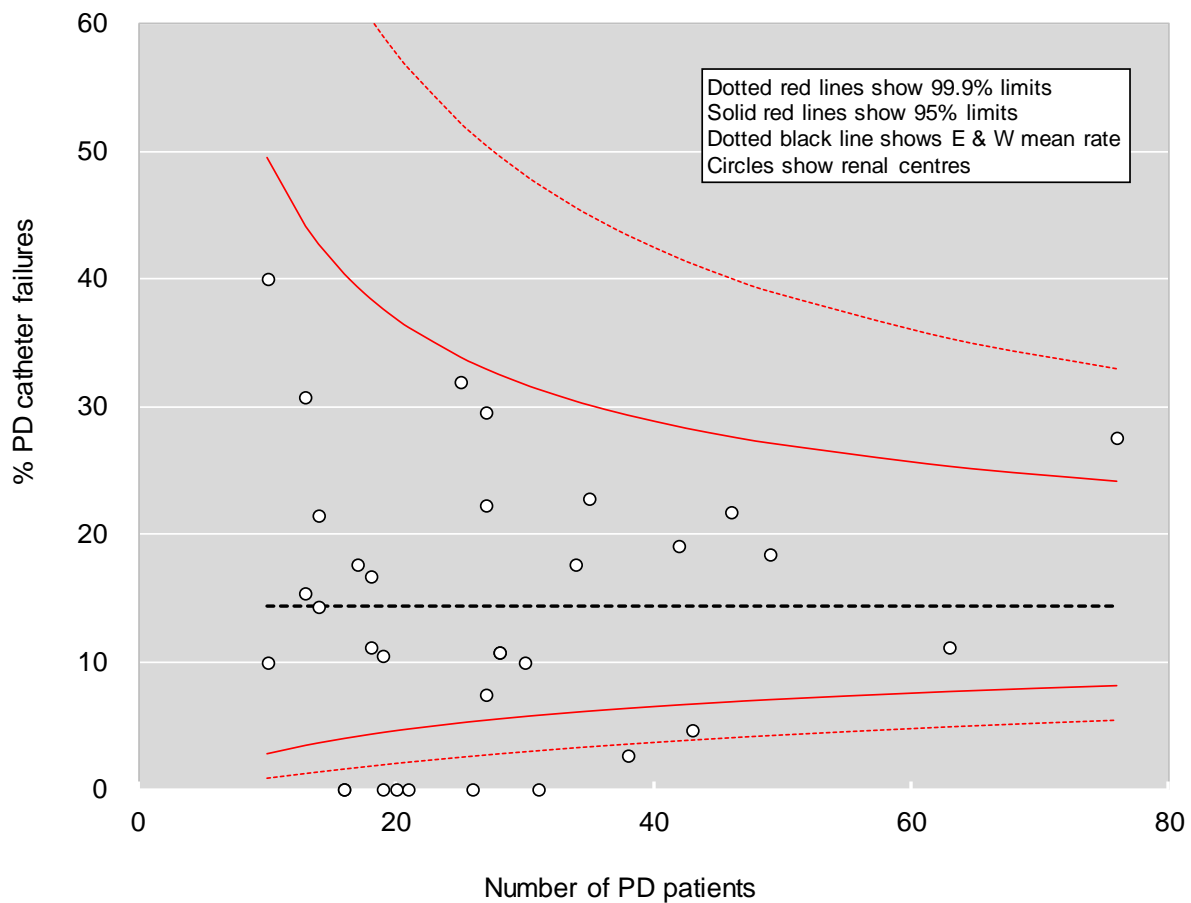
\*Excluding late presentation

Numbers in brackets represent the number of patients with data in each centre rather than missing data



**Figure 1.17** PD catheter insertion technique for adult patients incident to PD in 2017 by centre (2017 Multisite Dialysis Access Audit)

Numbers in brackets represent the number of patients with data in each centre  
Centres are ordered by decreasing percentage of non-surgical PD insertion technique

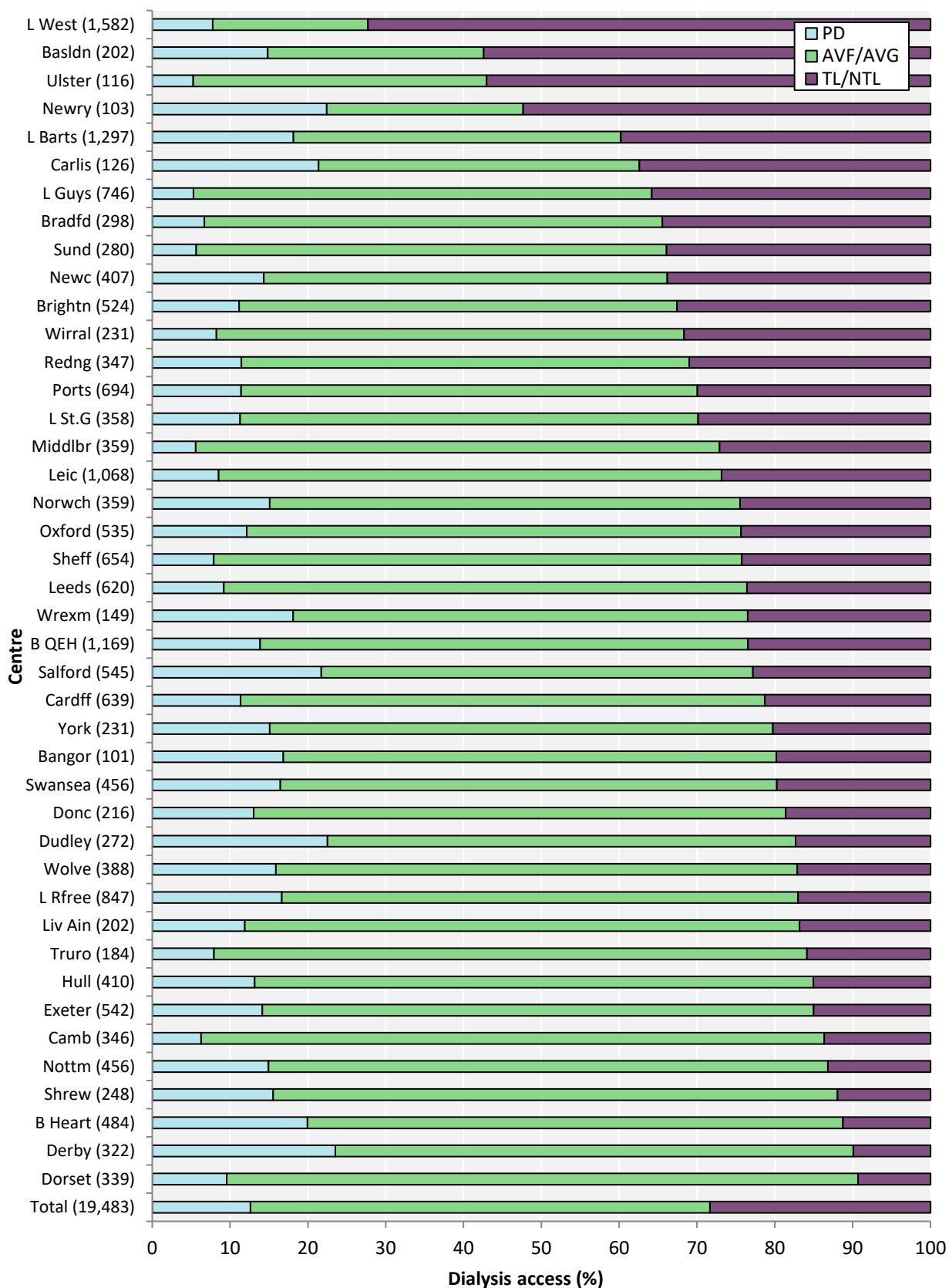


**Figure 1.20** Percentage of PD catheter failures within 1 year of first ever PD session for adult patients incident to PD in 2016 (2016 Multisite Dialysis Access Audit)

### **Chapter 3 Adults on in-centre haemodialysis (ICHHD) in the UK at the end of 2017**

The following analyses related to dialysis access in prevalent adult dialysis patients were adjusted to include Swansea and Basildon renal centres for 2017.





**Figure 3.17** Dialysis access in adult patients prevalent to dialysis on 31/12/2017 by centre (2017 Multisite Dialysis Access Audit)  
 Number of patients on dialysis in a centre in brackets (centres with <70% access data for the prevalent dialysis population are excluded) Centres are sorted by decreasing proportion of patients on RRT with a line  
 AVF – arteriovenous fistula; AVG – arteriovenous graft; NTL – non-tunnelled line; TL – tunnelled line