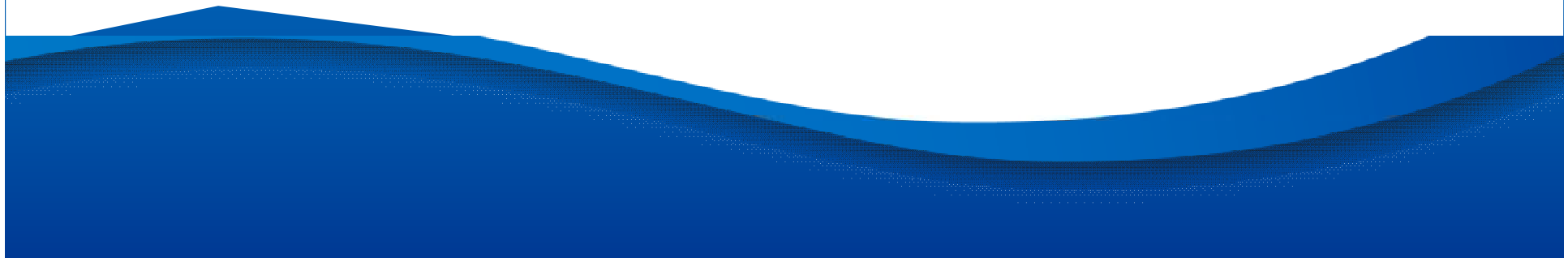


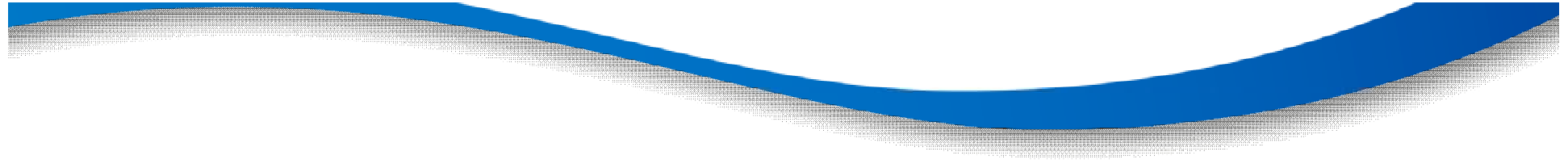
NORS Review Implementation Working Group 1

14 September 2016 CTAG(16)S22





Blood and Transplant



Team Activity

CT Retrieval Team Attendances

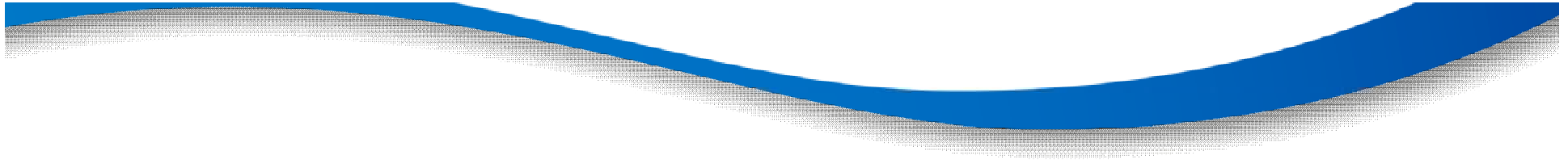
8pm 4 April to 4 July – 2016 versus 2015 activity

	DBD		DCD		Total	
	Proceeding 2016 (2015)	Non-proceeding 2016 (2015)	Proceeding 2016 (2015)	Non-proceeding 2016 (2015)	Proceeding 2016 (2015)	Non-proceeding 2016 (2015)
Birmingham	13 (9)	4 (5)	1 (2)	9 (2)	14 (11)	13 (7)
Harefield	13 (18)	11 (11)	1 (8)	3 (9)	14 (26)	14 (20)
Manchester	11 (11)	1 (3)	2 (0)	7 (3)	13 (11)	8 (6)
Newcastle	12 (9)	5 (4)	2 (1)	1 (7)	14 (10)	6 (11)
Papworth	14 (16)	5 (8)	4 (5)	4 (4)	18 (21)	9 (12)
Scotland	8 (3)	4 (1)	1 (0)	0 (0)	9 (3)	4 (1)
Total	71 (66)	30 (32)	11 (16)	24 (25)	82 (82)	54 (57)

AB Retrieval Team Attendances

8pm 4 April to 4 July – 2016 versus 2015 activity

	DBD		DCD		Total	
	Proceeding 2016 (2015)	Non-proceeding 2016 (2015)	Proceeding 2016 (2015)	Non-proceeding 2016 (2015)	Proceeding 2016 (2015)	Non-proceeding 2016 (2015)
Birmingham	21 (22)	0 (0)	12 (14)	13 (6)	33 (36)	13 (6)
Cambridge	21 (23)	0 (0)	19 (29)	14 (10)	40 (52)	14 (10)
Cardiff	3 (15)	0 (0)	3 (5)	4 (3)	6 (20)	4 (3)
King's College	44 (32)	3 (4)	24 (21)	12 (15)	68 (53)	15 (19)
Leeds/Manchester	28 (33)	0 (0)	26 (17)	16 (13)	54 (50)	16 (13)
Newcastle	21 (23)	2 (2)	18 (13)	14 (10)	39 (36)	16 (12)
Oxford	20 (18)	0 (0)	13 (5)	7 (7)	33 (23)	7 (7)
Royal Free	14 (17)	0 (0)	8 (9)	4 (4)	22 (26)	4 (4)
Scotland	19 (11)	1 (0)	14 (11)	6 (5)	33 (22)	7 (5)
Total	191 (194)	6 (6)	137 (124)	90 (73)	328 (318)	96 (79)

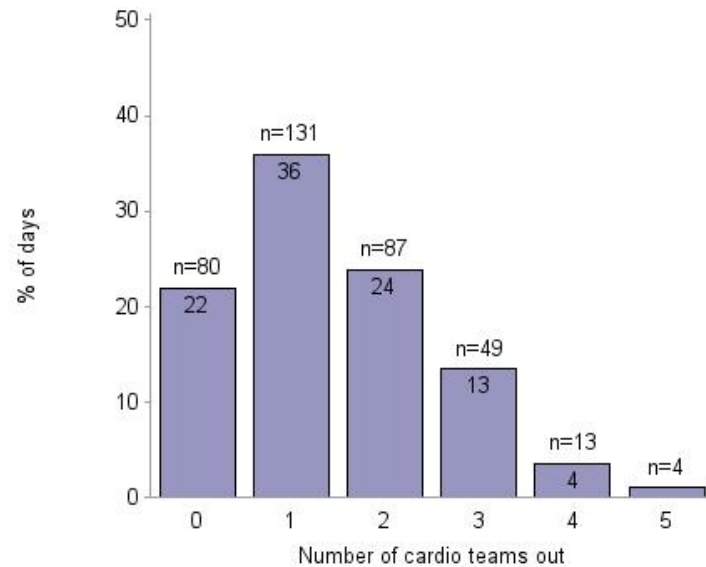


Deployment of a 4th team

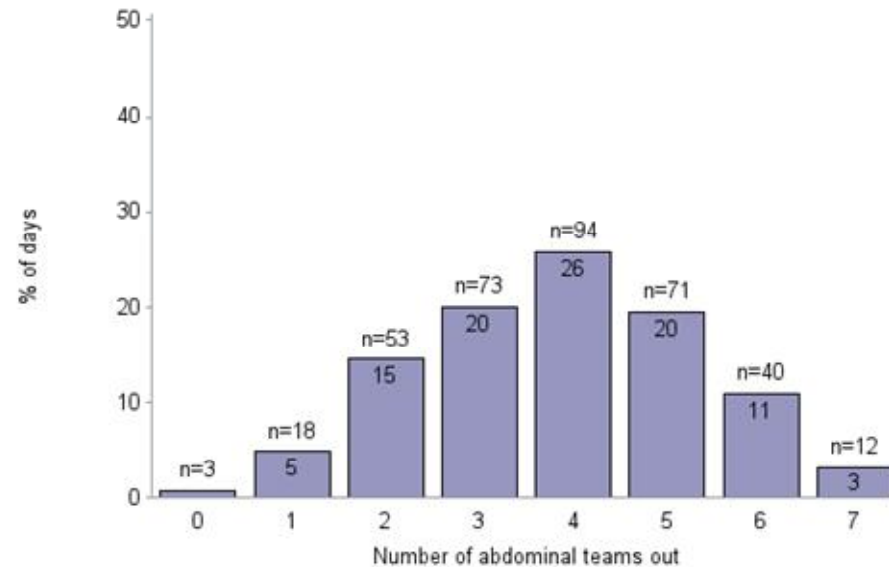
No. teams out on one day

Previous NORS activity levels (2015/16)

Cardiothoracic

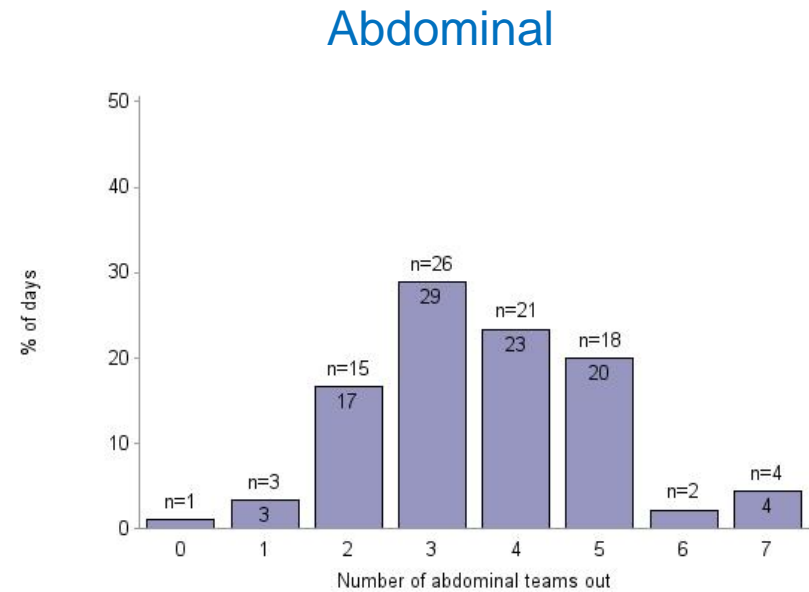
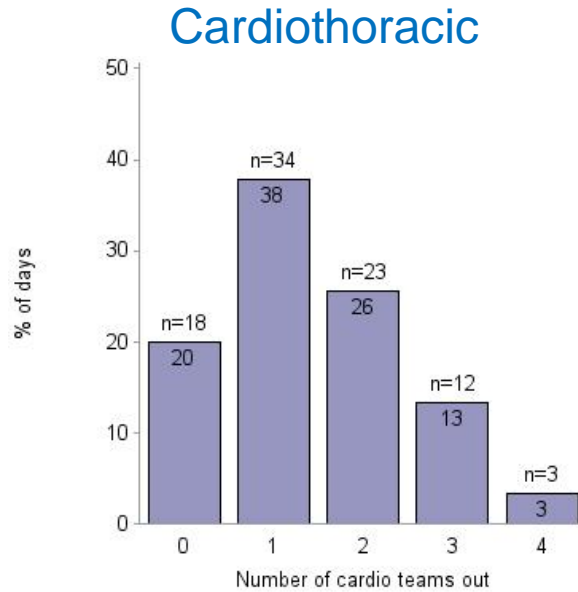


Abdominal

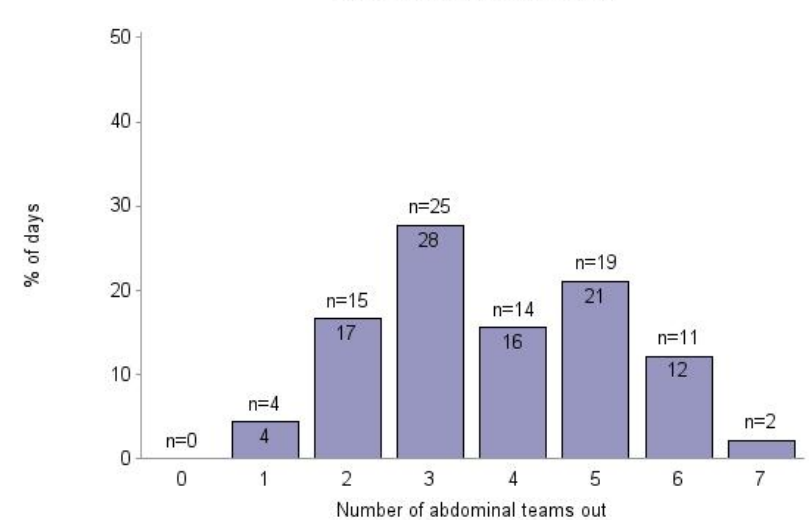
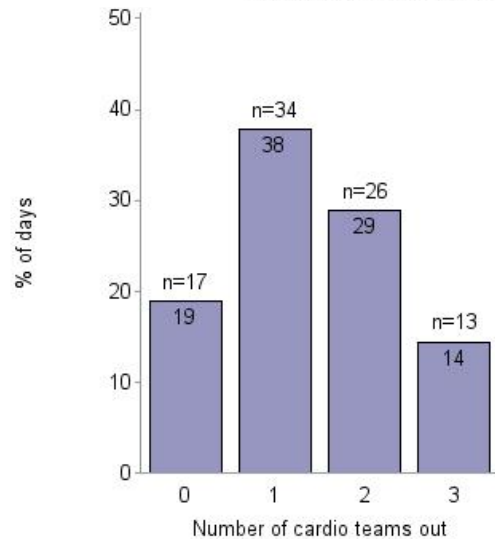


No. teams out on one day

4 April 2015 to
4 July 2015



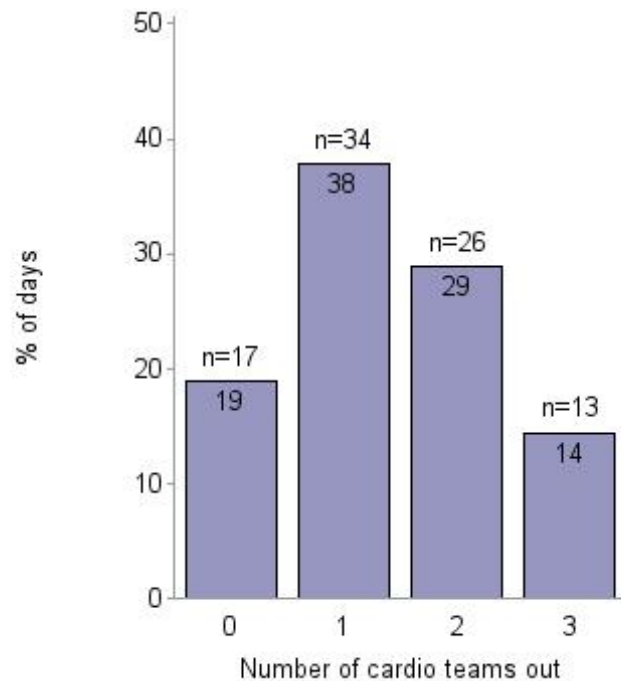
4 April 2016 to
4 July 2016



No. teams out on one day

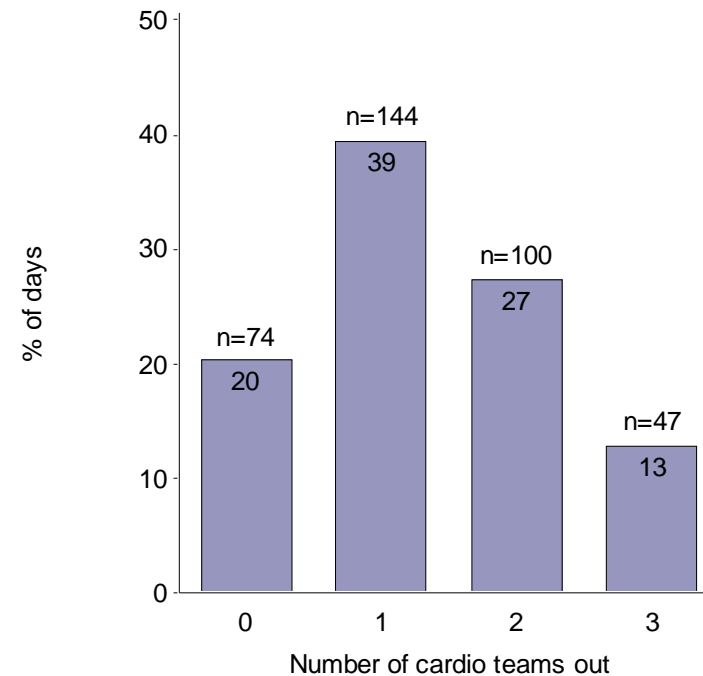
Actual

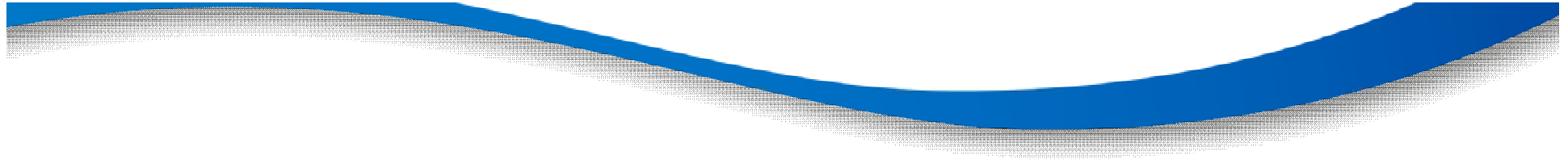
4 April 2016 (8pm) to 4 July 2016



Projected – simulation 1

1 April 2013 to 31 March 2014





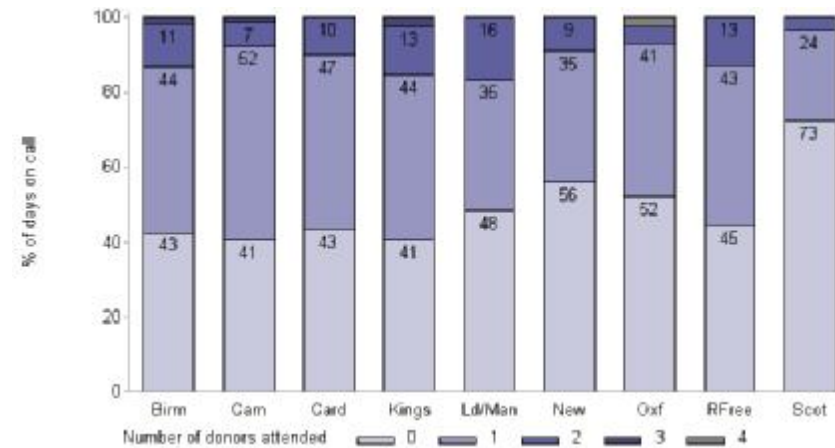
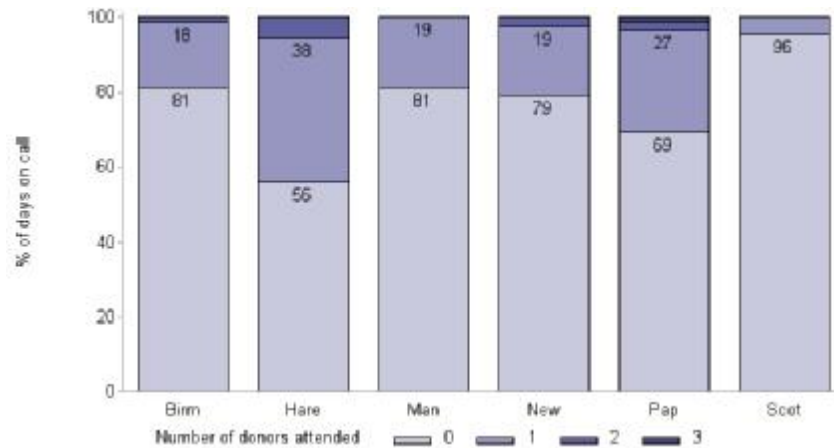
Back to back retrieval team attendances

Back to back retrieval team attendances

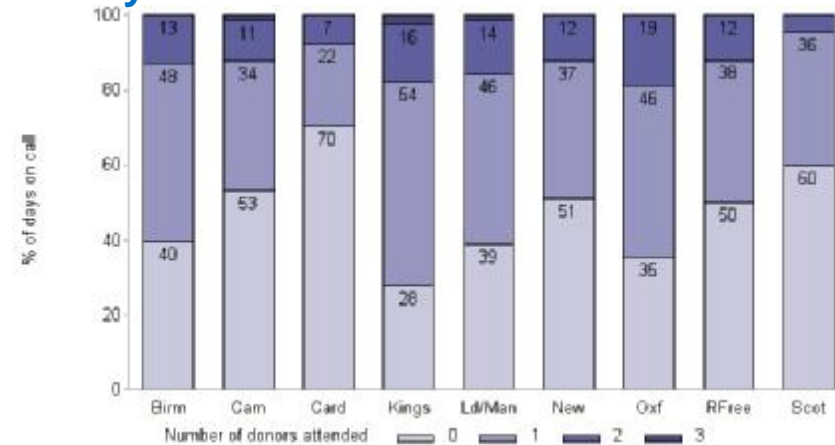
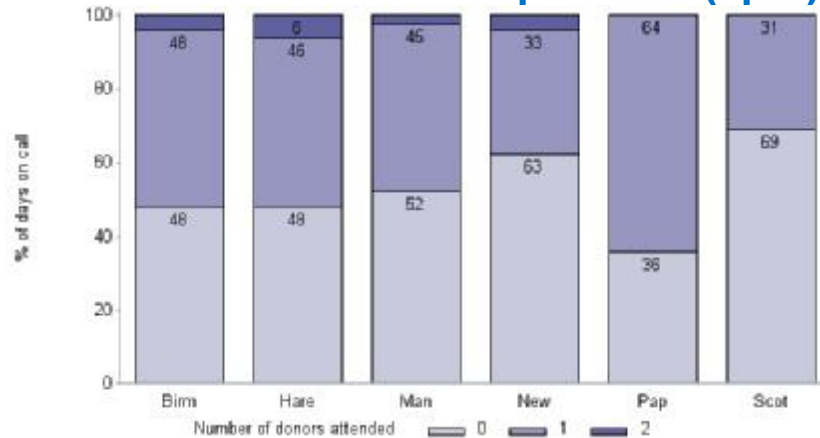
Cardiothoracic*

Abdominal

4 April 2015 (8pm) to 4 July 2015



4 April 2016 (8pm) to 4 July 2016



* A day is defined as 8pm on day one to 7.59pm on day 2 for cardiothoracic teams only

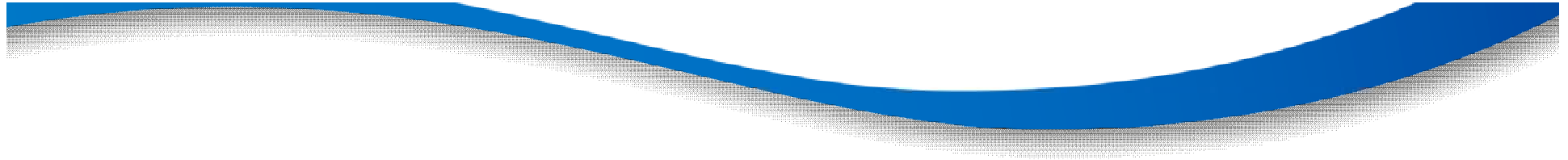
Back to back retrieval team attendances*

4 April to 4 July

Retrieval team	2015			2016		
	No. attendances	No. cases less than 2 hours (%)	Missing values (%)	No. attendances	No. cases less than 2 hours (%)	Missing values (%)
Abdominal						
Birmingham AB team	42	1 (2.4)	4 (9.5) ³	46	2 (4.3)	5 (10.9) ⁴
Cambridge AB team	62	1 (1.6)	4 (6.5) ³	54	0 (0)	4 (7.4) ¹
Cardiff AB team	23	4 (17.4)	4 (17.4) ²	10	0 (0)	1 (10)
King's College AB team	72	6 (8.3)	7 (9.7) ⁴	83	0 (0)	16 (19.3) ¹⁰
Leeds/Manchester AB team	63	4 (6.3)	3 (4.8) ¹	70	1 (1.4)	15 (21.4) ²
Newcastle AB team	48	0 (0)	3 (6.3) ¹	55	0 (0)	6 (10.9) ³
Oxford AB team	30	0 (0)	1 (3.3)	40	1 (2.5)	5 (12.5) ⁴
Royal Free AB team	30	0 (0)	2 (6.7)	26	1 (3.8)	2 (7.7)
Scotland AB team	27	0 (0)	3 (11.1) ¹	40	4 (10)	3 (7.5) ²
Cardiothoracic						
Birmingham CT team	18	0 (0)	1 (5.6)	27	0 (0)	3 (11.1)
Harefield CT team	46	1 (2.2)	6 (13) ²	28	0 (0)	9 (32.1) ¹
Manchester CT team	17	0 (0)	2 (11.8)	21	0 (0)	3 (14.3)
Newcastle CT team	21	0 (0)	2 (9.5)	20	0 (0)	11 (55)
Papworth CT team	33	1 (3)	3 (9.1)	27	0 (0)	5 (18.5) ¹
Scotland CT team	4	0 (0)	1 (25)	13	0 (0)	4 (30.8) ¹

* where time between estimated return to base for retrieval 1 and agreed departure time for retrieval 2 is less than 2 hours

NOTE: Superscript numbers beside missing values indicate how many of the missing had an agreed departure time for retrieval 2 that was before the estimated return to base for retrieval 1



Travel Times

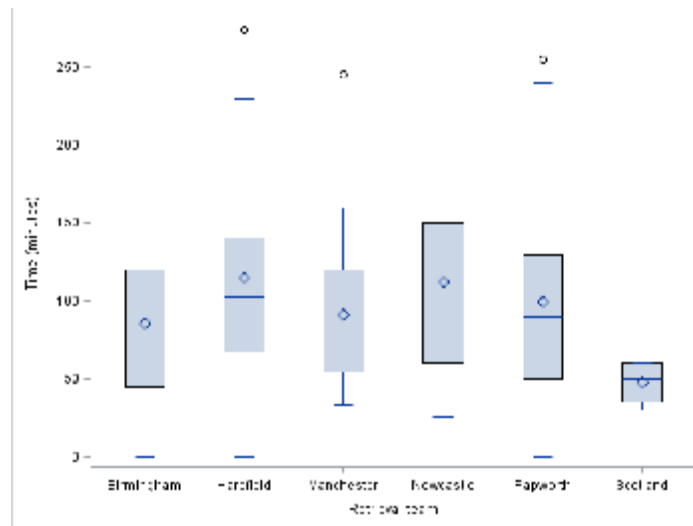
% Times each team arrived at donor hospital within 3 hours of leaving base

	Q1 2015/16	Q2 2015/16	Q3 2015/16	Q4 2015/16	4 April 2016 – 4 July 2016
Abdominal					
Birmingham	88%	82%	90%	84%	77%
Cambridge	97%	94%	92%	98%	93%
Cardiff	68%	91%	63%	84%	100%
King's College	89%	90%	93%	93%	90%
Leeds/Manchester	98%	95%	96%	99%	95%
Newcastle	80%	95%	92%	91%	89%
Oxford	92%	90%	97%	97%	95%
Royal Free	97%	93%	94%	81%	85%
Scotland	89%	100%	94%	92%	87%
TOTAL ABDOMINAL	90%	92%	92%	92%	90%
Cardiothoracic					
Birmingham	94%	96%	83%	96%	96%
Harefield	84%	84%	97%	97%	92%
Manchester	94%	95%	96%	91%	79%
Newcastle	90%	87%	89%	87%	69%
Papworth	90%	97%	92%	100%	85%
Scotland	100%	86%	100%	100%	75%
TOTAL CARDIOTHORACIC	89%	91%	92%	95%	85%

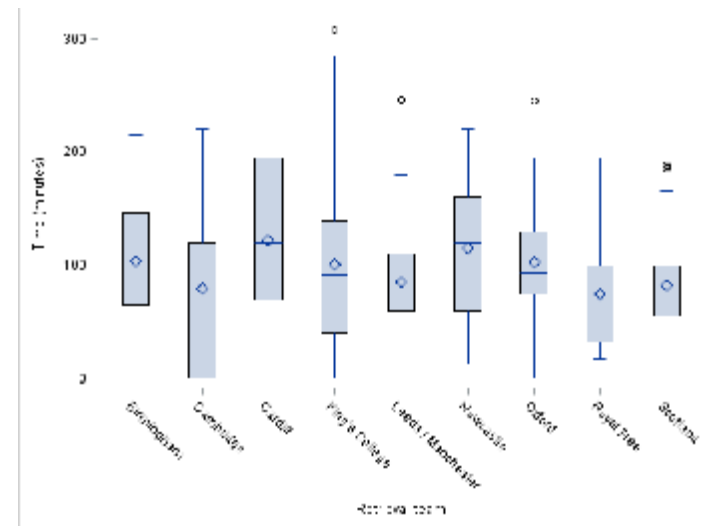
Team departure from base and arrival to theatre

4 April 2015 to
4 July 2015

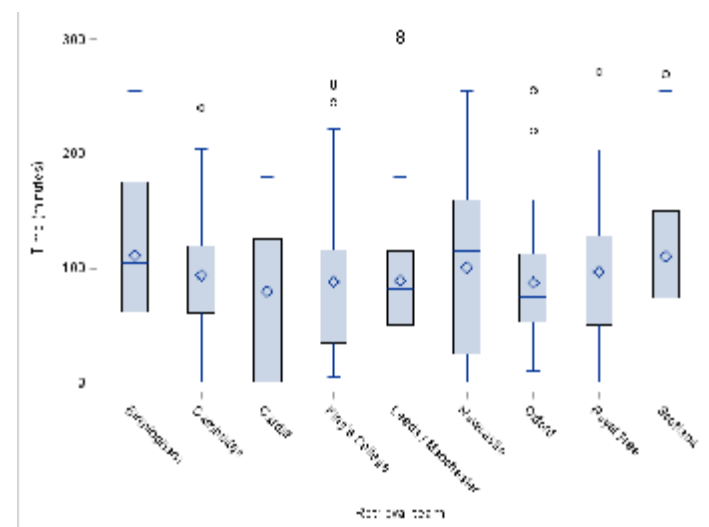
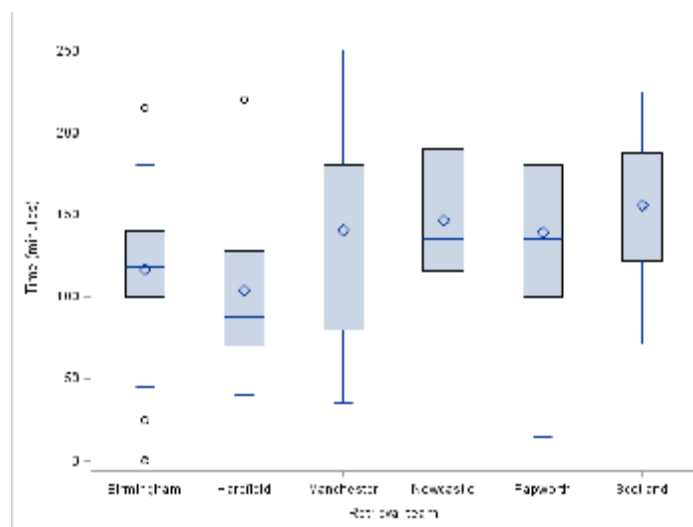
Cardiothoracic

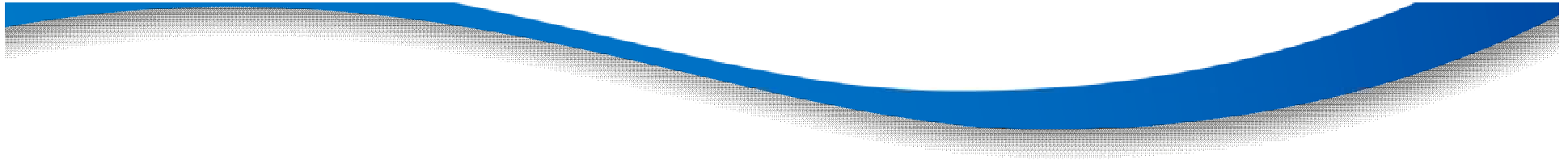


Abdominal



4 April 2016 to
4 July 2016



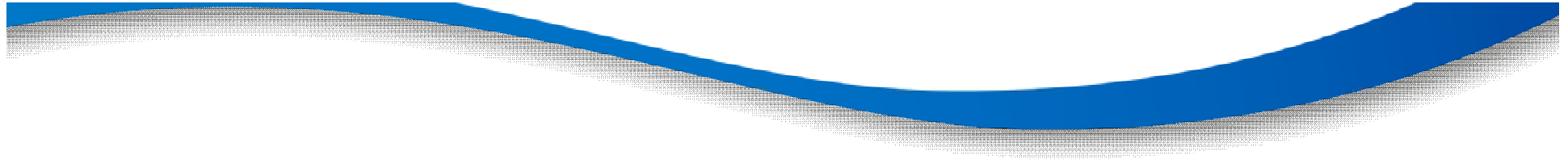


Decline Rates

Organ decline rates

	4 April 2015 – 4 July 2015		4 April 2016 – 4 July 2016	
	Heart N=457	Lung N=374	Heart N=437	Lung N=314
Birmingham	86%	94%	94%	95%
Harefield	96%	94%	98%	86%
Manchester	89%	94%	89%	93%
Newcastle	94%	90%	90%	86%
Papworth	83%	86%	87%	88%
Scotland	97%	–	88%	–
Total	91%	92%	91%	89%

Cohort: UK adult (≥ 16) DBD solid organ donors offered to adult centres (excluding Fast Track offers and offers that resulted in lung lobe transplants)
Heart/Lung offers are included in both columns and Heart/Lung offers to Glasgow have been excluded



Retrieval Durations

Heatmaps for Cardiothoracic Retrieval Team timings

Time of call out/mobilisation:

4 April 2015 – 4 July 2015:

Weekday	Hour																							Total	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		23
Monday	2	2	1	0	1	1	1	1	3	0	0	2	0	2	0	0	0	0	0	0	1	0	0	1	18
Tuesday	1	2	1	2	4	3	2	2	4	0	0	0	1	2	1	0	0	0	2	0	0	1	3	1	32
Wednesday	1	1	2	0	0	0	5	0	0	0	1	2	0	0	0	1	1	0	1	0	1	1	2	3	22
Thursday	0	1	0	0	2	0	0	0	5	1	0	0	1	0	2	0	1	0	2	0	0	0	1	0	16
Friday	0	0	0	1	0	4	2	1	1	0	1	0	0	0	0	0	0	0	1	0	2	0	0	0	13
Saturday	2	2	1	2	0	1	1	2	3	0	1	2	0	0	0	1	0	0	0	0	0	2	2	0	22
Sunday	0	2	0	0	0	0	2	0	3	3	0	3	0	0	0	0	0	1	1	0	0	0	0	0	15
Total	6	10	5	5	7	9	13	6	19	4	3	9	2	4	3	2	2	1	7	0	4	4	8	5	138

4 April 2016 – 4 July 2016:

Weekday	Hour																							Total	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		23
Monday	0	0	1	1	0	1	3	1	1	0	0	1	1	1	2	0	1	0	0	0	0	0	0	0	14
Tuesday	3	1	0	2	0	0	1	1	3	1	0	2	0	0	1	0	1	0	0	0	1	0	0	0	17
Wednesday	1	1	1	0	2	0	1	1	1	1	1	2	1	2	1	1	0	1	1	1	1	2	1	1	25
Thursday	2	0	2	1	0	0	2	4	3	1	0	1	3	1	0	2	0	0	1	0	0	0	0	0	23
Friday	0	0	1	2	0	2	1	0	1	1	0	1	1	1	0	1	1	1	1	0	1	0	0	0	16
Saturday	2	2	0	1	0	0	3	1	4	1	1	0	0	1	0	1	0	0	1	0	0	0	0	0	18
Sunday	0	0	1	0	1	0	2	1	0	1	0	1	0	0	1	0	0	0	0	1	0	0	0	0	9
Total	8	4	6	7	3	3	13	9	13	6	2	8	6	6	5	5	3	2	4	2	3	2	1	1	122

Heatmaps for Cardiothoracic Retrieval Team timings

Time team returned back to base*:

4 April 2015 – 4 July 2015:

Weekday	Hour																								Total
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
Monday	0	1	0	1	0	0	1	0	1	3	0	0	1	0	2	1	1	0	2	0	1	1	0	1	17
Tuesday	0	0	0	0	1	0	1	3	2	0	2	1	1	3	0	2	3	2	1	2	0	1	0	0	25
Wednesday	0	1	1	2	1	1	2	1	1	1	2	0	0	0	1	2	0	2	1	1	0	1	1	0	22
Thursday	1	0	1	0	2	2	0	3	1	1	0	0	0	1	1	1	0	1	1	0	1	0	1	1	19
Friday	0	1	1	1	1	0	0	0	0	1	2	0	1	1	2	1	0	1	0	0	0	0	0	0	13
Saturday	1	1	1	0	0	1	1	0	3	0	0	1	2	2	1	2	0	0	2	1	0	0	1	0	20
Sunday	0	1	0	0	1	3	0	2	0	0	0	0	0	1	1	1	2	4	0	1	0	1	0	0	18
Total	2	5	4	4	6	7	5	9	8	6	6	2	5	8	8	10	6	10	7	5	2	4	3	2	134

4 April 2016 – 4 July 2016:

Weekday	Hour																								Total
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
Monday	1	0	1	0	0	0	0	0	0	0	0	2	1	1	0	1	1	0	2	0	0	0	1	0	11
Tuesday	2	1	1	0	0	0	0	1	1	0	3	1	0	1	0	1	0	0	0	1	3	1	1	0	18
Wednesday	1	0	1	0	0	0	2	0	0	2	0	0	2	0	0	2	0	0	0	0	4	1	1	0	16
Thursday	1	1	2	1	2	1	2	1	1	0	0	0	1	3	0	0	3	2	2	1	0	1	1	3	29
Friday	0	2	1	0	1	0	0	1	0	1	1	0	0	1	0	0	0	1	0	2	2	1	1	1	16
Saturday	1	1	1	0	1	0	0	0	0	0	2	1	3	0	1	1	1	1	2	2	0	0	0	2	20
Sunday	2	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	1	0	1	1	0	1	0	0	9
Total	8	5	7	1	4	1	4	3	2	3	6	6	7	6	2	5	6	4	7	7	9	5	5	6	119

*calculated as the time the team departed donor theatre plus the travel time to the donor hospital (as the back to base time is not recorded)

Heatmaps for Abdominal Retrieval Team timings

Call out/mobilisation:

4 April 2015 – 4 July 2015:

Weekday	Hour																							Total	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		23
Monday	10	6	2	2	1	1	0	3	5	2	1	1	1	5	0	2	0	1	0	1	2	3	3	1	53
Tuesday	3	4	2	8	4	5	4	5	2	2	1	1	2	0	2	1	0	1	1	0	1	3	5	4	61
Wednesday	4	1	11	8	4	5	3	2	3	3	2	4	1	0	0	1	1	1	1	1	2	4	4	4	70
Thursday	6	5	9	2	4	0	3	8	4	1	3	0	0	1	3	2	1	0	5	2	3	2	6	2	72
Friday	2	3	3	5	3	4	8	0	1	1	0	4	2	1	1	0	0	1	1	1	0	3	3	2	49
Saturday	5	8	5	3	1	3	4	5	3	2	4	1	0	1	0	1	1	0	0	0	2	2	0	2	53
Sunday	3	2	2	0	1	3	2	2	1	3	3	2	2	0	0	0	0	0	1	1	4	2	1	4	39
Total	33	29	34	28	18	21	24	25	19	14	14	13	8	8	6	7	3	4	9	6	14	19	22	19	397

4 April 2016 – 4 July 2016:

Weekday	Hour																							Total	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		23
Monday	2	1	1	3	1	3	5	4	3	1	2	0	4	1	3	0	0	0	0	0	2	1	3	1	41
Tuesday	3	6	2	3	3	5	4	3	1	2	2	3	0	3	2	0	1	2	1	1	0	3	0	1	51
Wednesday	2	4	4	5	2	1	6	6	2	3	3	0	5	4	0	0	3	3	2	2	4	3	4	4	72
Thursday	3	4	7	6	5	4	6	10	7	2	3	1	5	2	3	2	3	1	2	0	1	2	2	1	82
Friday	2	3	4	3	4	6	3	4	3	2	0	2	5	0	0	1	3	2	1	1	3	2	1	3	58
Saturday	2	4	4	6	4	2	3	6	6	5	3	2	1	1	1	1	0	0	1	4	1	1	3	2	63
Sunday	2	2	4	1	2	4	6	7	2	1	2	2	2	2	1	3	2	0	0	0	2	0	0	1	48
Total	16	24	26	27	21	25	33	40	24	16	15	10	22	13	10	7	12	8	7	8	13	12	13	13	415

Heatmaps for Abdominal Retrieval Team timings

Time team returned back to base*:

4 April 2015 – 4 July 2015:

Weekday	Hour																							Total	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		23
Monday	0	1	1	1	0	6	2	5	5	5	4	2	0	1	1	2	0	2	3	3	5	0	3	1	53
Tuesday	0	2	1	1	3	2	3	1	5	1	0	4	3	2	1	5	7	6	2	2	2	1	2	0	56
Wednesday	0	0	2	1	2	1	6	4	6	4	7	4	3	3	2	4	2	3	2	5	3	1	2	1	68
Thursday	2	1	1	1	3	1	4	8	2	6	5	5	2	4	1	2	3	3	4	1	1	1	2	1	64
Friday	3	4	0	2	5	1	2	4	5	4	4	1	2	2	4	2	4	3	1	3	1	0	2	0	59
Saturday	1	0	2	3	1	4	3	3	3	3	10	2	0	5	3	5	1	1	3	2	1	1	0	1	58
Sunday	1	1	0	1	0	6	1	0	3	1	1	2	0	0	0	1	3	6	1	3	1	0	0	1	33
Total	7	9	7	10	14	21	21	25	29	24	31	20	10	17	12	21	20	24	16	19	14	4	11	5	391

4 April 2016 – 4 July 2016:

Weekday	Hour																							Total	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		23
Monday	3	1	2	1	0	0	1	2	2	1	2	1	0	2	2	3	3	4	0	4	0	0	2	3	39
Tuesday	1	1	2	1	0	3	1	1	5	4	3	2	2	4	0	3	2	1	5	1	3	3	1	0	49
Wednesday	0	1	3	2	2	1	2	2	2	4	2	3	2	2	4	6	1	1	2	3	2	4	3	0	54
Thursday	3	3	3	4	3	2	2	4	4	7	3	2	4	4	4	6	5	6	2	7	6	1	2	5	92
Friday	2	0	1	3	3	2	3	4	2	5	2	3	2	1	3	1	5	3	0	2	2	1	2	2	54
Saturday	3	2	3	2	4	2	3	2	4	3	3	3	3	2	4	4	3	4	3	3	0	2	0	2	64
Sunday	2	5	0	4	2	1	4	1	3	2	2	4	4	3	3	2	1	5	3	1	2	2	0	0	56
Total	14	13	14	17	14	11	16	16	22	26	17	18	17	18	20	25	20	24	15	21	15	13	10	12	408

*calculated as the time the team departed donor theatre plus the travel time to the donor hospital (as the back to base time is not recorded)

No. retrieval team attendances that crossed over the rota handover time*

4 April 2016-4 July 2016	
Abdominal	
Birmingham AB team	2
Cambridge AB team	0
Cardiff AB team	1
King's College AB team	0
Leeds/Manchester AB team	0
Newcastle AB team	0
Oxford AB team	2
Royal Free AB team	0
Scotland AB Team	0
Cardiothoracic	
Birmingham CT team	0
Harefield CT team	0
Manchester CT team	0
Newcastle CT team	2
Papworth CT team	1
Scotland CT team	0

* Abdominal handover time assumed as 8am

* Cardiothoracic handover time assumed as 8pm