



Critical Care Tri Network Clinical Forum

Network Data

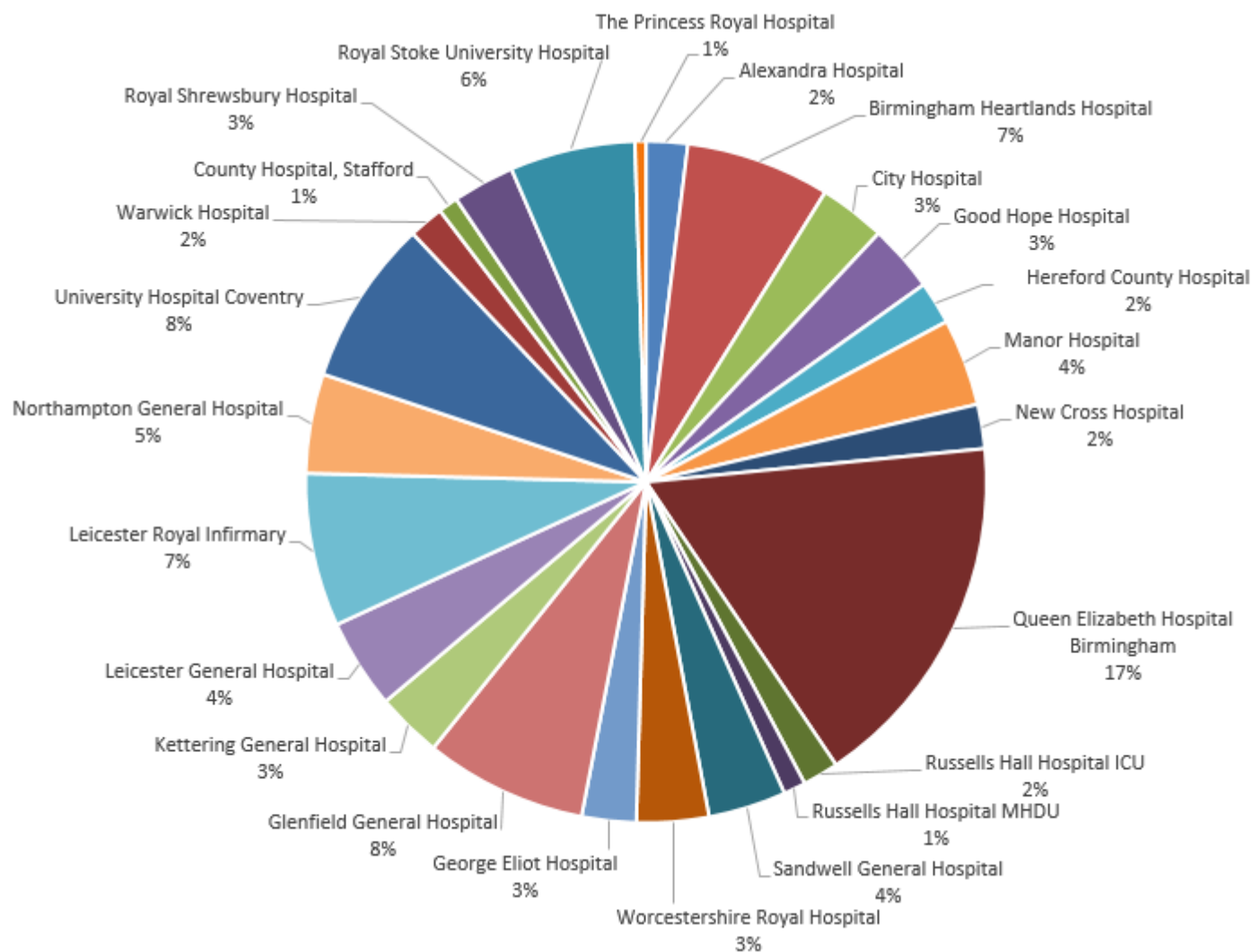
Data period: Financial Year, 2015/16

Participation

Network	Hospital	Critical care unit	Q1	Q2	Q3	Q4
BBC	Alexandra Hospital	Intensive Care Unit				
	Birmingham Heartlands Hospital	Intensive Care Unit				
	City Hospital	Critical Care Services				
	Good Hope Hospital	Intensive Therapy Unit				
	Hereford County Hospital	Intensive Therapy Unit				
	Manor Hospital	Critical Care Unit				
	New Cross Hospital	Integrated Critical Care Unit				
	Queen Elizabeth Hospital Birmingham	Critical Care Unit				
	Russells Hall Hospital	Intensive Care Unit				
	Russells Hall Hospital	Medical High Dependency Unit				
	Sandwell General Hospital	Critical Care Services				
	Worcestershire Royal Hospital	Intensive Care Unit				
CE	George Eliot Hospital	Intensive Therapy Unit				
	Glenfield General Hospital	Adult Intensive Care Unit				
	Kettering General Hospital	Intensive Care Unit				
	Leicester General Hospital	Intensive Care Unit				
	Leicester Royal Infirmary	Critical Care Unit				
	Northampton General Hospital	Intensive Care Unit				
	University Hospital Coventry	General Critical Care Unit				
	Warwick Hospital	Intensive Care Unit				
NWM	County Hospital, Stafford	Critical Care Unit				
	Royal Shrewsbury Hospital	Intensive Care Unit/High Dependency Unit				
	Royal Stoke University Hospital	Critical Care Unit				
	The Princess Royal Hospital	Intensive Therapy Unit/High Dependency Unit				

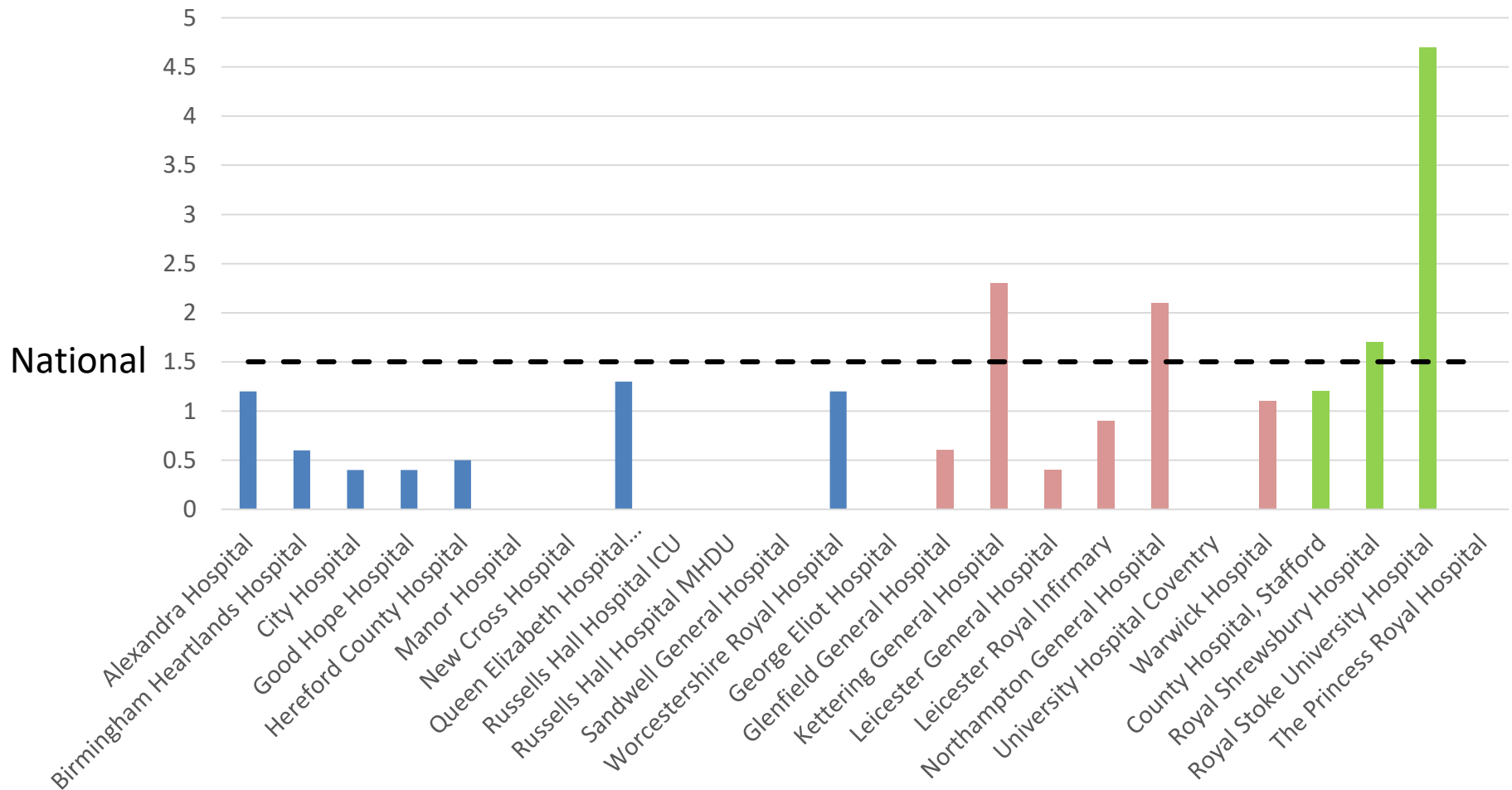
	Data included				Data excluded - not received
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19,105 admissions during the year



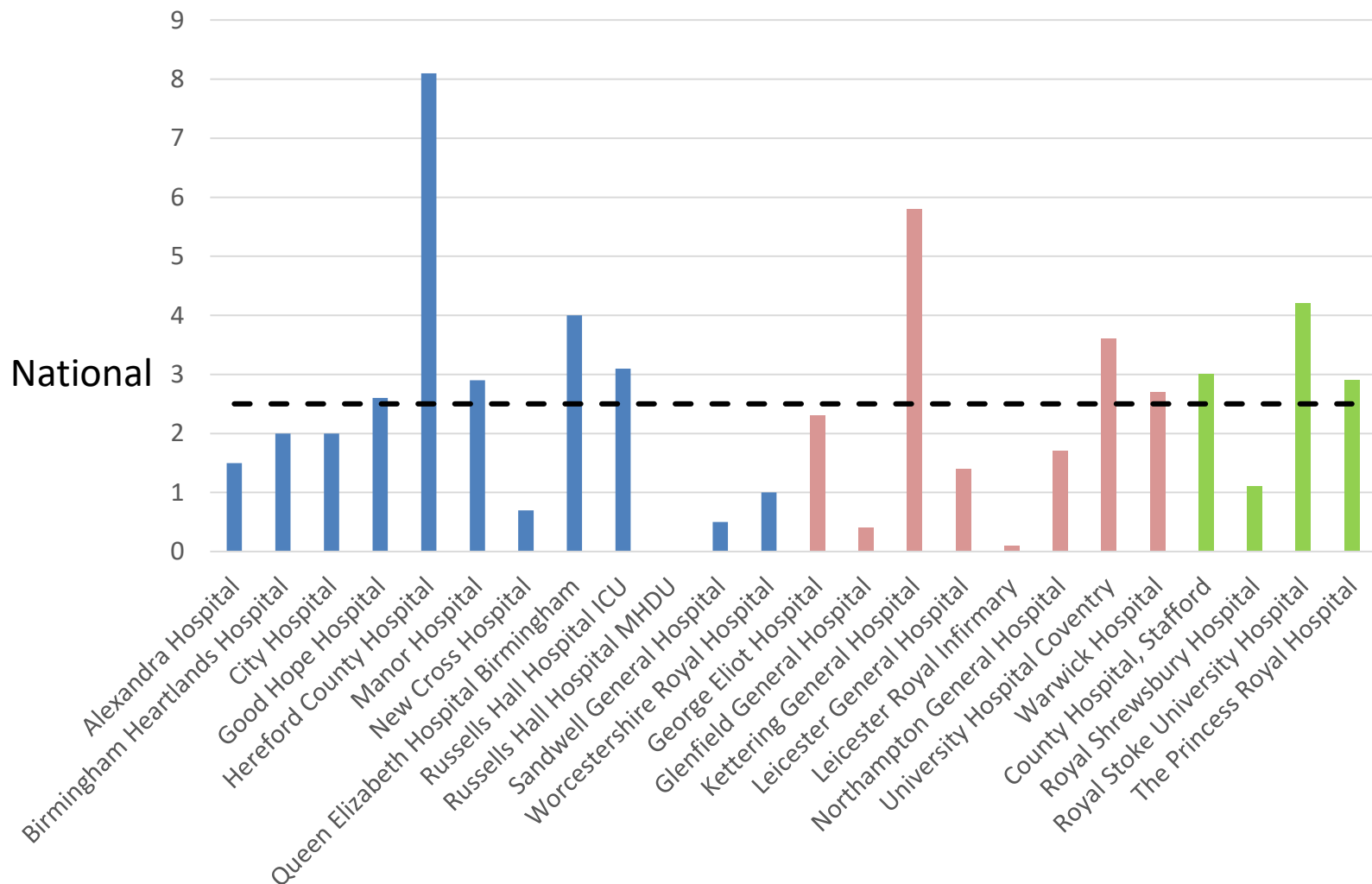
Unit acquired infections in blood

- Eligible: Critical care unit admissions staying at least 48 hours
- Numerator: Number of unit-acquired infections in blood, defined as the presence of infection in any blood sample taken for microbiological culture after 48 hours following admission
- Denominator: Total number of patient days that eligible admissions stayed in the critical care unit



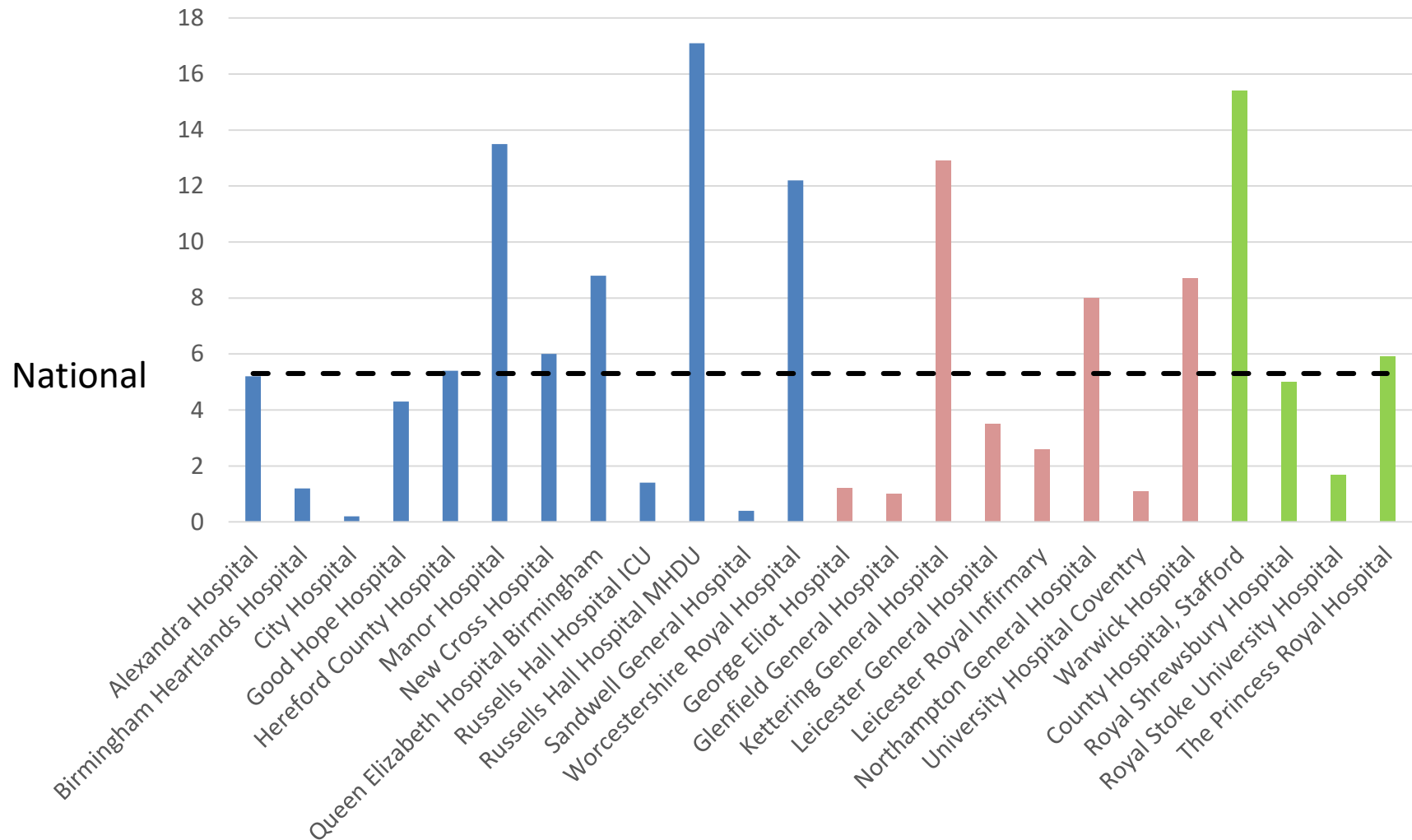
Out-of-hours discharges to the ward (not delayed)

- Eligible: Critical care unit survivors discharged to a ward in the same hospital
- Numerator: Number of eligible admissions discharged between 22:00 and 06:59 and not delayed (i.e. not declared fully ready for discharge by 18:00 on that day)
- Denominator: Number of eligible admissions



Bed days of care post 8-hour delay

- Eligible: All critical care unit admissions
- Numerator: Bed days of care provided for critical care unit survivors more than 8 hours after the reported time fully ready for discharge
- Denominator: Total number of available bed days in the critical care unit



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There were **18,931** patients eligible for inclusion in this metric

They racked up a total of **6,810** bed days from the available **131,924**

This figure of **5.16%** is just under the national average of **5.3%**

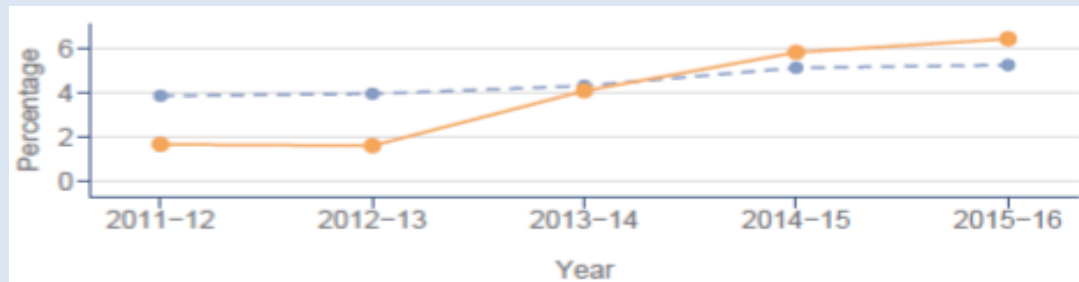
Works out at **19** beds across the tri-network effectively blocked every day due to delayed discharges

There was some variance between networks though...

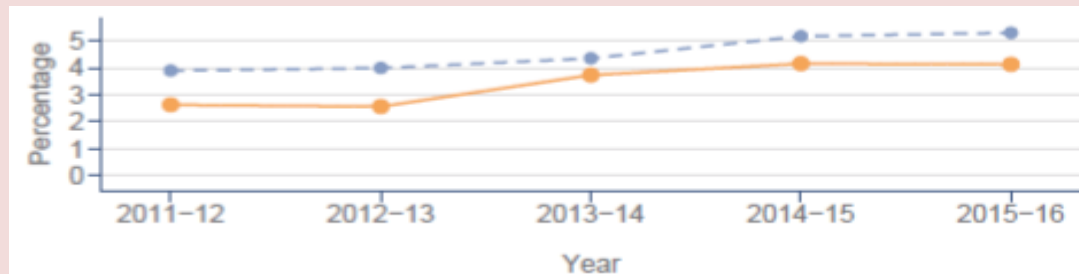
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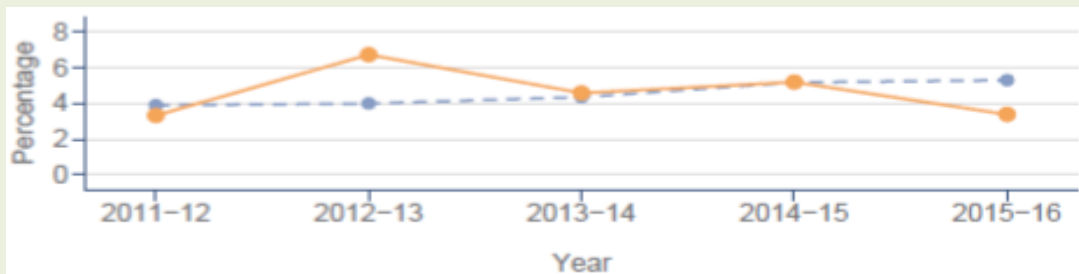
BBC - 6.5%



CE - 4.1%



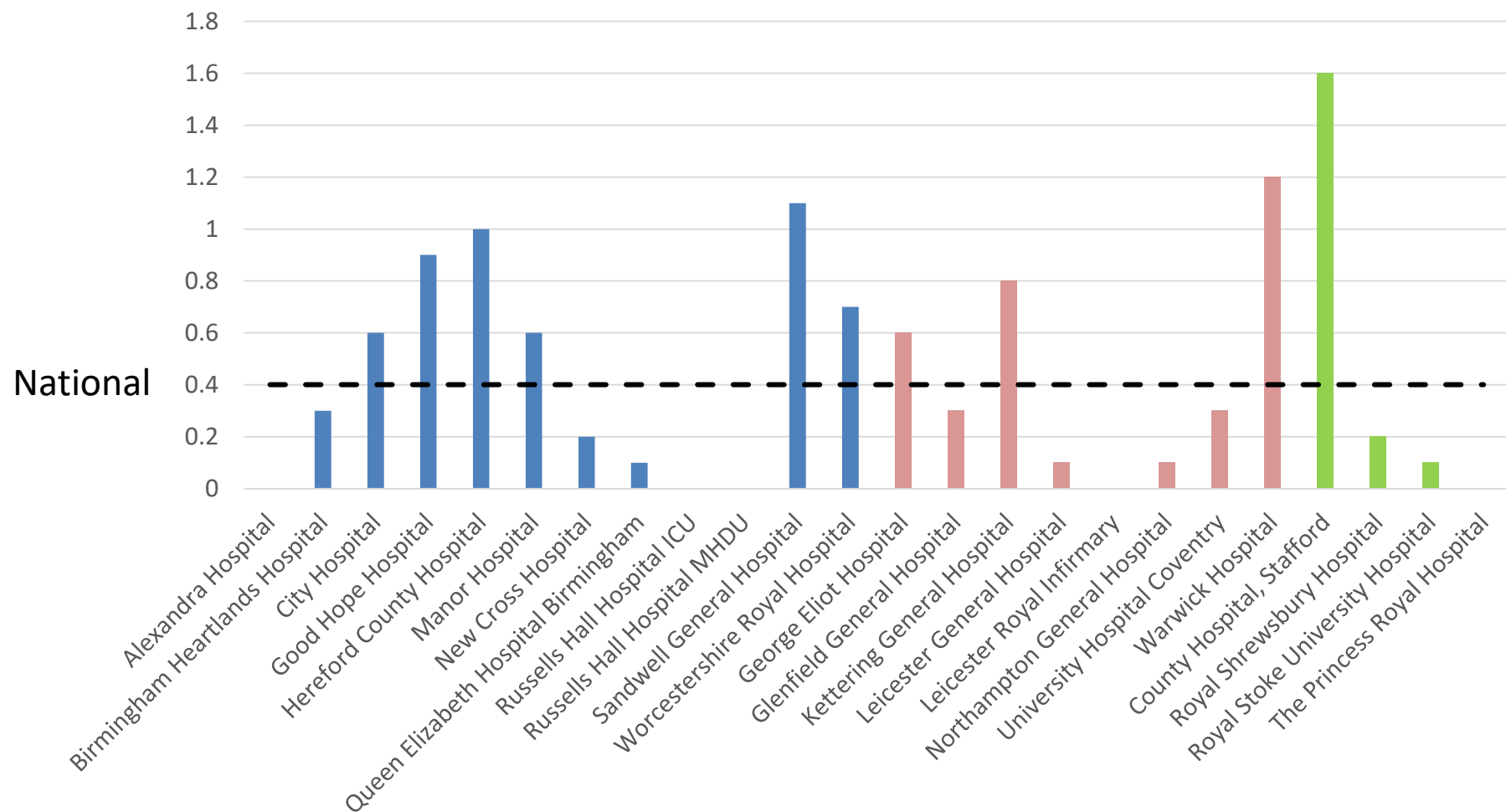
NWM - 3.4%



● Network units ● All units

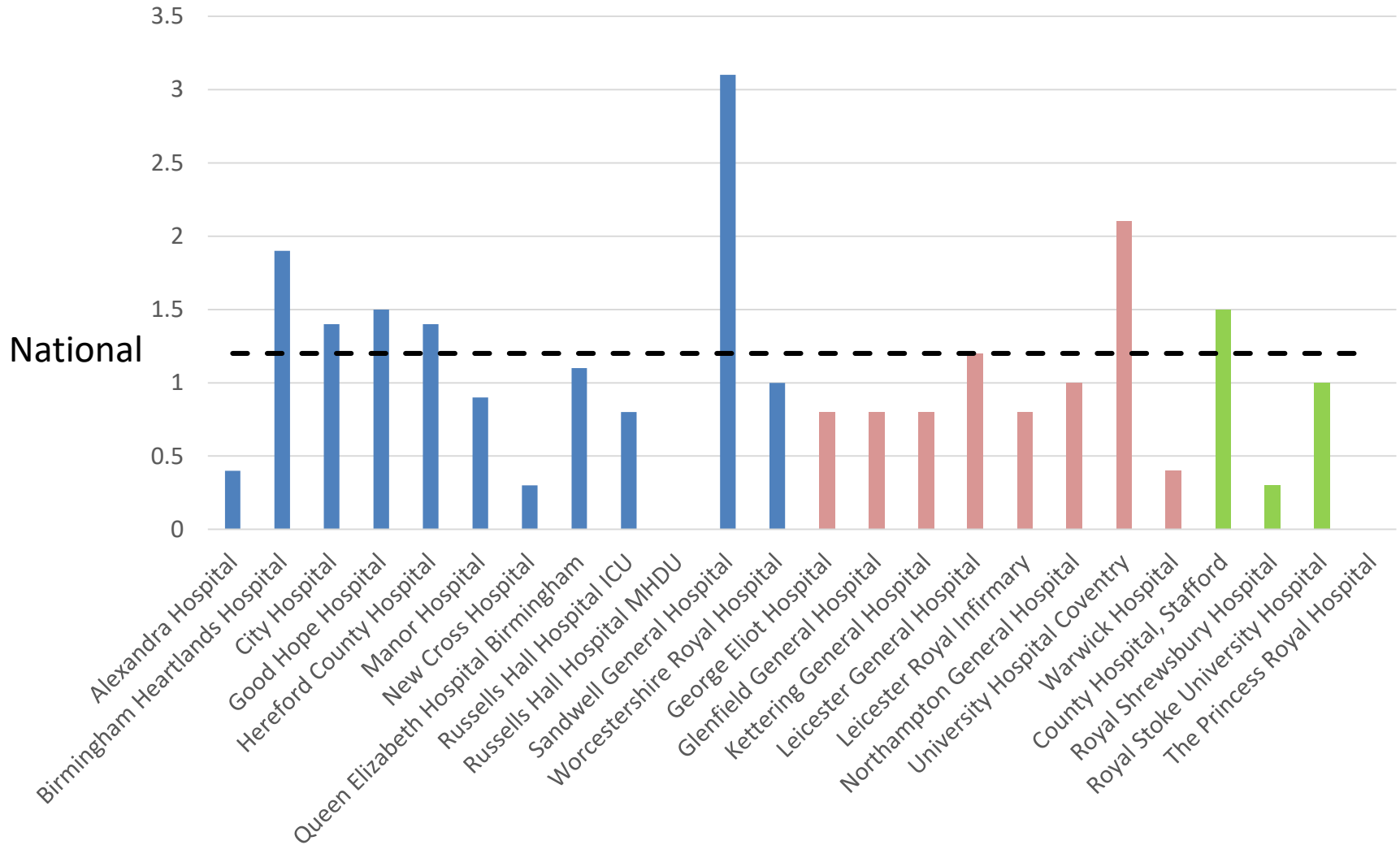
Non-clinical transfers (out)

- Eligible: All critical care unit admissions
- Numerator: Number of critical care unit survivors receiving Level 3 care (for HDUs, Level 2 care) on discharge and discharged for comparable critical care to a Level 3 bed (for HDUs, a Level 2 bed) in a critical care unit in another acute hospital
- Denominator: Number of eligible admissions



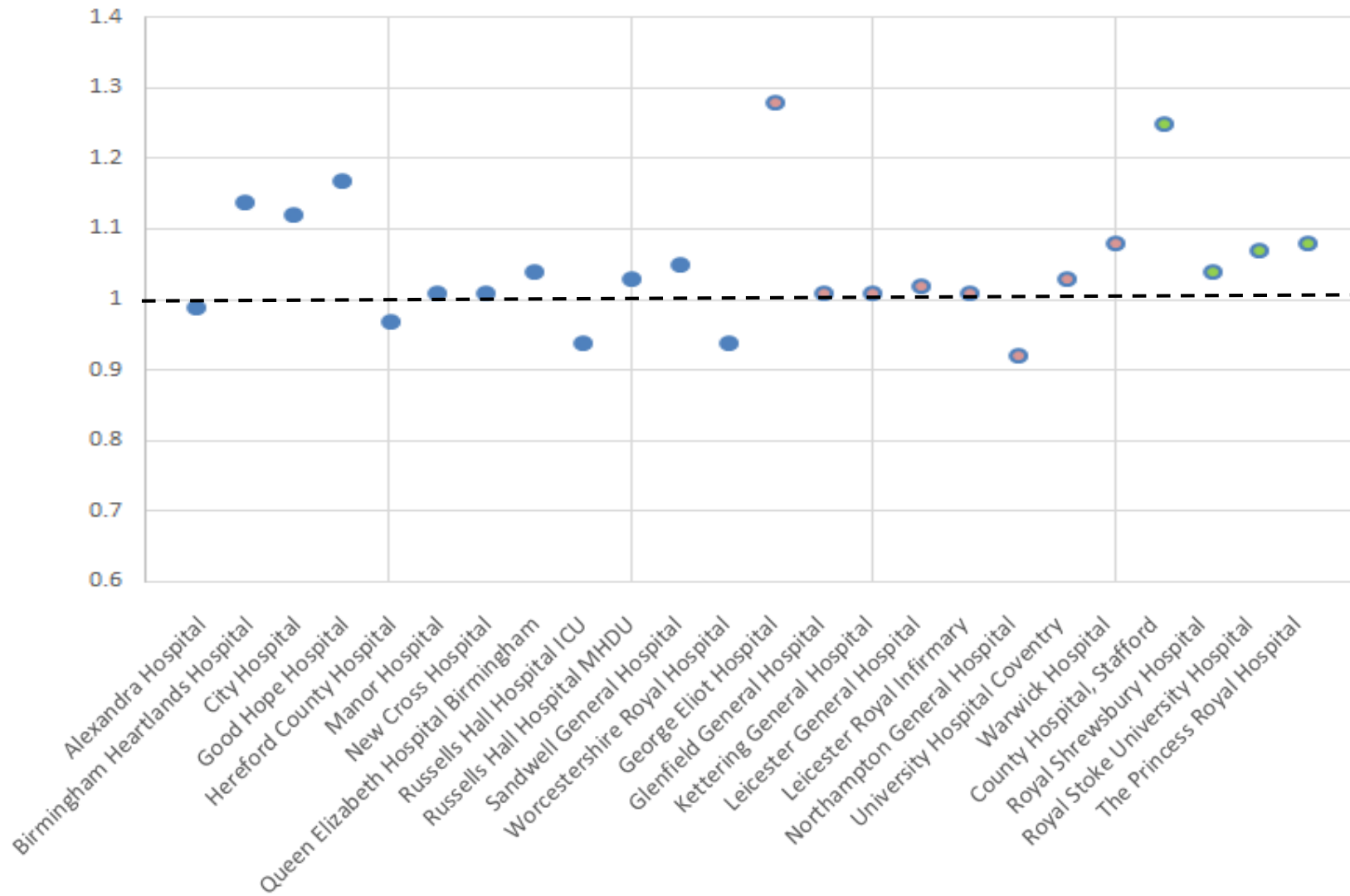
Unplanned readmissions within 48 hours

- Eligible: Critical care unit survivors discharged to a ward within the same hospital
- Numerator: Number of eligible admissions subsequently readmitted (unplanned) to the same critical care unit within 48 hours of discharge
- Denominator: Number of eligible admissions



Risk-adjusted acute hospital mortality

- Eligible: All critical care unit admissions, excluding readmissions, patients dead on admission and admissions to facilitate organ donation
- Numerator: Observed number of eligible admissions that died before ultimate discharge from acute hospital
- Denominator: Expected number of acute hospital deaths among eligible admissions from the ICNARC 2015 model



Network case mix

	National	BBC	CE	NWM
Age (years), mean (SD)	61.1 (17.7)	60.3 (17.8)	61.3 (17.0)	59.0 (17.6)
Male, n (%)	(56.6)	5708 (56.4)	4548 (58.2)	1199 (59.0)
Severe conditions in past medical history, n (%)				
Severe liver disease	(2.6)	519 (5.2)	144 (1.8)	40 (2.0)
Haematological malignancy	(1.9)	217 (2.2)	148 (1.9)	53 (2.6)
Metastatic disease	(3.4)	547 (5.4)	239 (3.1)	49 (2.4)
Prior dependency, n (%)				
Able to live without assistance with daily activities	(77.0)	8004 (79.6)	6094 (78.1)	1704 (84.7)
Some (minor/major) assistance with daily activities	(22.0)	1984 (19.7)	1643 (21.1)	297 (14.8)
Total assistance with all daily activities	(1.1)	66 (0.7)	62 (0.8)	10 (0.5)
CPR within 24 hours prior to admission, n (%)				
Community CPR	(2.6)	371 (3.7)	252 (3.2)	101 (5.0)
In-hospital CPR	(2.6)	296 (2.9)	193 (2.5)	54 (2.7)
Source of admission, n (%)				
Emergency department or not in hospital – unplanned admission	(23.4)	2549 (25.2)	1521 (19.5)	725 (35.7)
Emergency department or not in hospital – planned admission	(0.8)	63 (0.6)	18 (0.2)	4 (0.2)
Theatre – planned admission following elective/scheduled surgery	(23.6)	2259 (22.3)	2543 (32.6)	137 (6.7)
Theatre – unplanned admission following elective/scheduled surgery	(3.8)	308 (3.0)	286 (3.7)	40 (2.0)
Theatre – admission following emergency/urgent surgery	(17.1)	1782 (17.6)	1382 (17.7)	261 (12.8)
Ward or intermediate care area	(25.2)	2765 (27.3)	1768 (22.6)	735 (36.2)
Other critical care unit – repatriation	(0.6)	18 (0.2)	52 (0.7)	12 (0.6)
Other critical care unit – planned or unplanned transfer	(4.7)	287 (2.8)	209 (2.7)	106 (5.2)
Other acute hospital (not critical care)	(0.9)	92 (0.9)	32 (0.4)	12 (0.6)
Severity scores, mean (SD)				
ICNARC Physiology Score	16.0 (8.9)	16.0 (8.7)	16.1 (8.8)	17.9 (8.9)
APACHE II Acute Physiology Score	10.8 (5.8)	11.3 (5.8)	10.7 (5.7)	12.3 (6.2)
APACHE II Score	15.1 (6.7)	15.7 (6.8)	14.9 (6.5)	16.3 (7.2)
ICNARC _{H-2015} model predicted risk of acute hospital mortality (%), median (IQR)	7.2 (2.0, 25.5)	7.4 (2.0, 26.4)	5.2 (1.5, 23.2)	15.9 (4.7, 38.8)

Network length of stay – median (IQR)

	National	BBC	CE	NWM
Length of stay in acute hospital prior to admission to a unit (days)*	1 (0, 2)	1 (0, 2)	1 (0, 2)	0 (0, 2)
Length of stay in a unit (hours)				
All admissions	53 (24, 120)	59 (27, 123)	47 (23, 99)	87 (37, 195)
Unit survivors	53 (25, 118)	61 (28, 121)	47 (24, 97)	89 (42, 203)
Unit non-survivors	54 (19, 147)	50 (18, 136)	48 (17, 128)	63 (24, 165)
Duration from reported time fully ready for discharge to time of discharge†, n(%)				
≤ 4 hours (including those where time fully ready missing)	(41.2)	2764 (31.9)	3267 (48.0)	592 (37.1)
> 4 hours and ≤ 24 hours	(41.6)	3981 (45.9)	2699 (39.7)	654 (41.0)
>24 hours	(17.2)	1927 (22.2)	835 (12.3)	348 (21.8)
Length of stay in acute hospital following discharge from the critical care unit (days)*†				
All unit survivors	8 (4, 18)	8 (4, 17)	7 (4, 15)	9 (4, 20)
Acute hospital survivors	8 (4, 17)	8 (4, 17)	7 (4, 14)	9 (4, 20)
Acute hospital non-survivors	9 (3, 23)	9 (3, 21)	9 (3, 21)	11 (4, 21)
Total length of stay in acute hospital (days)*				
All patients	11 (6, 24)	11 (6, 23)	11 (6, 21)	12 (5, 28)
Acute hospital survivors	12 (6, 25)	12 (7, 24)	12 (7, 22)	15 (7, 32)
Acute hospital non-survivors	7 (2, 19)	7 (2, 16)	6 (2, 16)	7 (2, 18)

* Excluding readmissions of the same patient within the same acute hospital stay

† Reported for unit survivors only

Number of organs supported

	Alexandra Hospital	Birmingham Heartlands Hospital	City Hospital	Good Hope Hospital	Hereford County Hospital	Manor Hospital	New Cross Hospital	Queen Elizabeth Hospital Birmingham	Russells Hall Hospital ICU	Russells Hall Hospital MHDU	Sandwell General Hospital	Worcestershire Royal Hospital	George Eliot Hospital	Glenfield General Hospital	Kettering General Hospital	Leicester General Hospital	Leicester Royal Infirmary	Northampton General Hospital	University Hospital Coventry	Warwick Hospital	County Hospital, Stafford	Royal Shrewsbury Hospital	Royal Stoke University Hospital	The Princess Royal Hospital
6 organs supported								4				2		28		4	8		1				2	
5 organs supported	6	4	4	1		6		22	4		5	14		33	4	15	22	4	13			2	13	
4 organs supported	23	4	24	7	2	23	7	195	22	1	16	53	8	124	3	3	75	36	126	6		17	62	3
3 organs supported	79	132	8	65	23	96	49	614	87	9	66	146	43	466	113	1	299	141	364	4	4	71	312	12
2 organs supported	88	372	185	18	146	235	143	834	134	44	231	25	149	763	273	194	614	257	364	118	31	158	354	39
1 organ supported	186	81	319	357	236	452	186	18	85	149	426	263	37	17	22	515	426	476	721	157	118	298	361	45