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National Organ Retrieval Service (NORS) Review

Challenge Event
17 July 2014

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Welcome and task for the day

- Morning session - The Challenge Ahead
 - The task the Review has been set and the approach

- Afternoon session – Workstreams
 - Breakout groups looking at:
 - Issues
 - Opportunities for improvement
 - Areas for recommendation

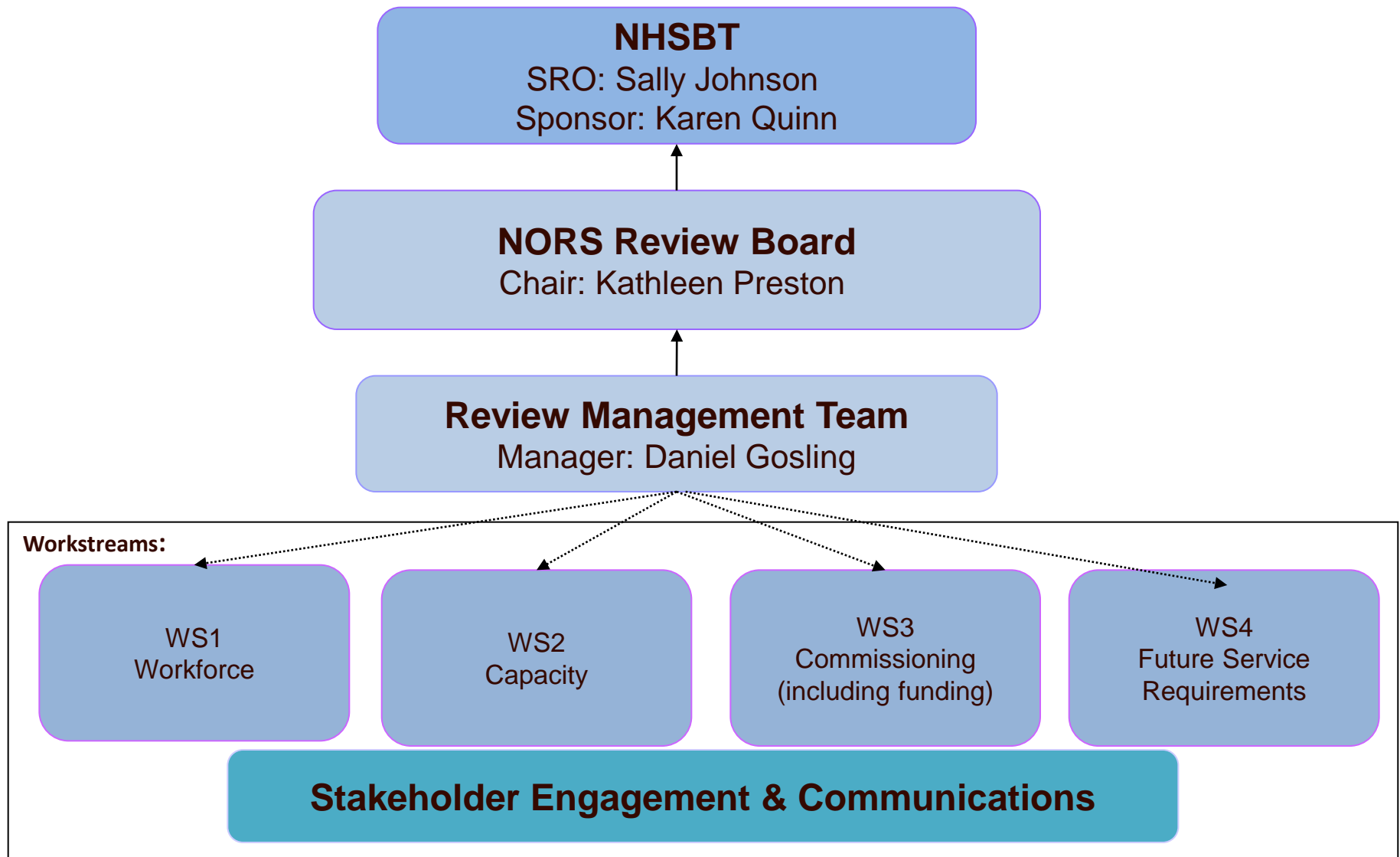
Background and summary

- Since April 2010, NHSBT has commissioned 13 organ retrieval teams across the UK to deliver a 24/7 national organ retrieval service.
- The system has worked well so far, contributing to achieving the 50% increase in organ retrieval.
- However, in line with best practice for commissioning of services, it has been agreed that a Review should be undertaken, to ensure the Service meets the requirements of the TOT 2020 Strategy.

Aim and objectives

- The aim of the Review is to benchmark current service provision, identify any gaps or shortfalls and make recommendations in line with the following principles:
 - Equity and timeliness of access to a retrieval team for all potential donors whilst acknowledging geographical challenges
 - Sufficient flexibility to cope with peaks/troughs in activity
 - High quality and cost effective
 - Ability to cope with projected future activity levels
- The Review Board is composed of senior representatives drawn from the profession and the NHS system, providers and commissioners and will include lay representation.
- The Board will evaluate the effectiveness of the current NORS provision and make recommendations, with due regard to advances in technology, in a report to ensure the future provision of a quality service across the UK.

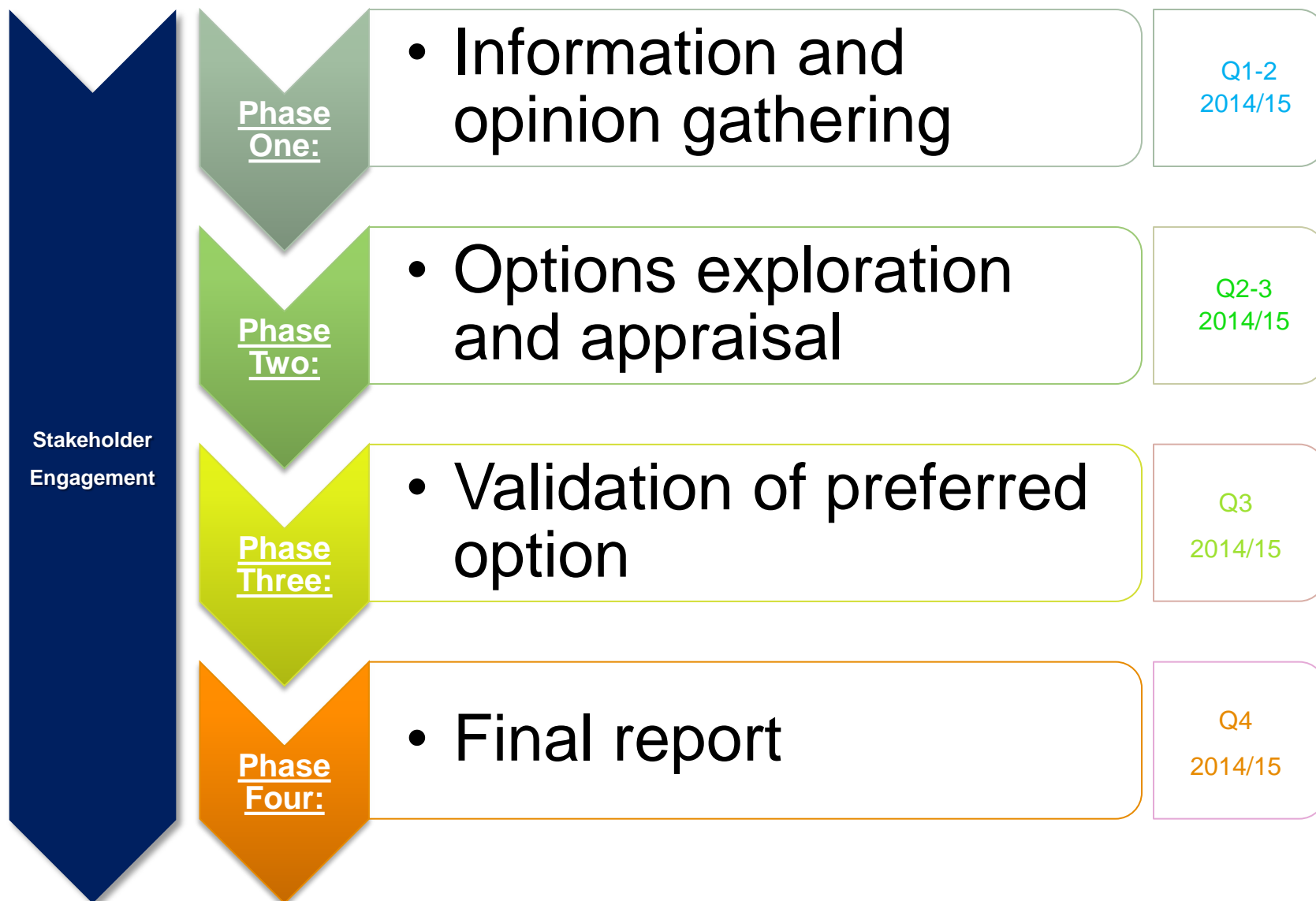
NORS Review Governance Structure



Board Membership

- **Chair:** Kathleen Preston
- **Review Manager:** Daniel Gosling
- James Neuberger: Associate Medical Director, NHSBT
- Rutger Ploeg: National Clinical lead for Organ Retrieval, NHSBT
- Karen Quinn: Accountable Executive and Assistant Director UK Commissioning, NHSBT
- Bimbi Fernando: British Transplantation Society
- Argyro Zoumprouli: CLOD / Intensivist and National Organ Donation Committee
- Triona Norman: Department of Health - England
- Veronica Gillen and Dr Diane Corrigan: NI Health Department
- Mike Winter: Scottish Health Department and NSD Commissioning representative
- David Heyburn: Welsh Health Specialised Services Committee
- David Nix: Donor Family Network
- Tracey Baker: Provider Management Representative
- Sarah Watson: NHS England
- Magdy Attia: NORS Lead – abdominal
- Stephen Clark: NORS Lead – cardiothoracic

Outline Plan



Background to the National Organ Retrieval Service (NORS)

James Neuberger, Associate Medical Director, NHSBT

Organs for Transplants

A report from the Organ Donation Taskforce



Working in partnership with

Problems with Previous Retrieval Arrangements

- Donors often attended by retrieval teams from multiple transplanting centres (kidney, liver, pancreas, cardiac, etc)
- Few team members were available exclusively for organ retrieval
 - Many had elective clinical commitments, restricting their ability to respond quickly
- Many teams relied on significant help from medical and nursing staff from the donor hospital
- Few teams provided early expert help in donor management

Recommendation for a National Organ Retrieval Service (NORS)

A UK-wide network of dedicated Organ Retrieval Teams should be established to ensure timely, high quality organ removal from all donors

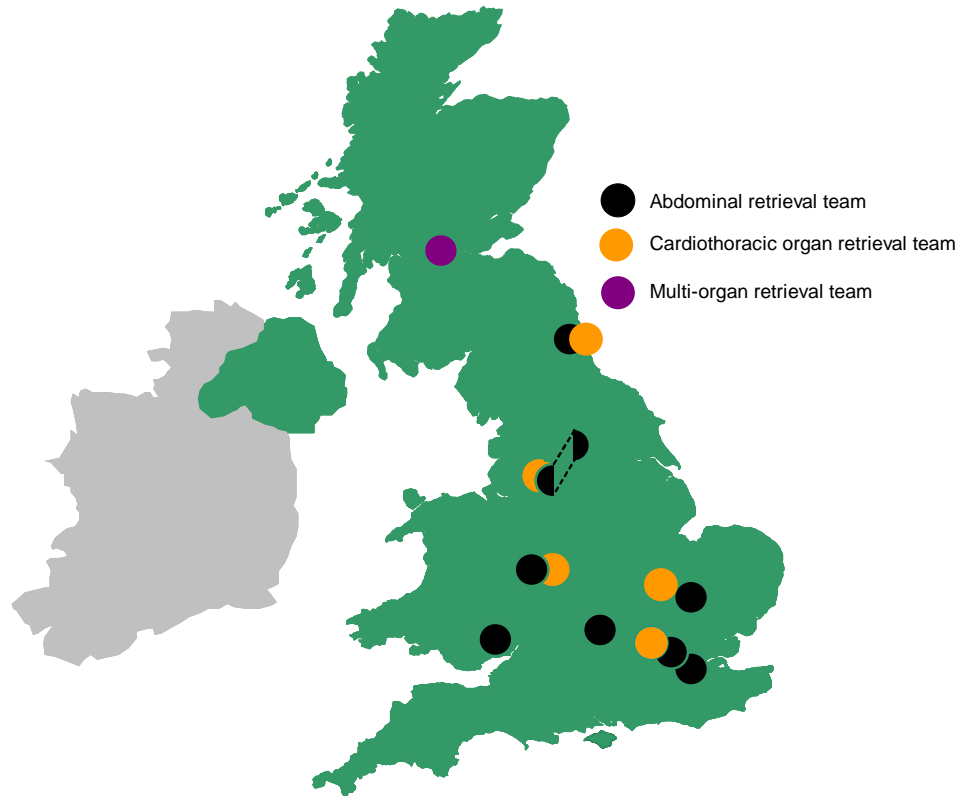
Organ Retrieval arrangements should be separate from organ allocation arrangements

- Fully staffed on-call availability 24/7
- Ability to despatch a team within an hour if required
- Three hour travel to donor hospital for minimum 90%
- Responsible for all equipment, perfusion fluids, drugs and documentation for retrieval

The UK National Organ Retrieval Service

8 Abdominal teams:

Birmingham
Cardiff
Cambridge
Kings
Leeds + Manchester
Newcastle
Oxford
Royal Free



5 Cardiothoracic teams:

Birmingham
Harefield
Manchester
Newcastle
Papworth

1 multi-organ team:

Scotland

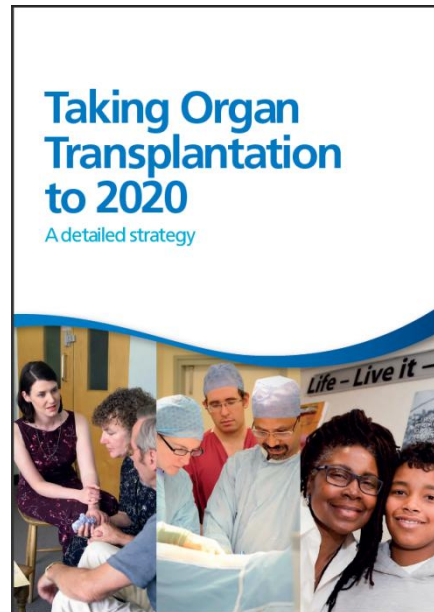
What has worked well

- Improved collaboration between NORS Teams
- Achievement of one hour muster and three hour travel times
- Introduction of three hour stand down times for abdominal teams
- Nationally agreed perfusion protocol for abdominal teams
- Introduction of a tariff for consumables

What could be better

- Funding inequitable due to differing service models
- Unpredictable activity
- Some teams more fully utilised than others
- Ability to cope with future projected growth to meet TOT 2020
- Sustainability

Taking Organ Transplantation to 2020 (TOT2020) Strategy



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NORS: Overview and trends since April 2010


Rachel Johnson
Statistics and Clinical Studies

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Audit and analysis of NORS undertaken by Statistics and Clinical Studies

- Overseen by National Retrieval Group (NRG)
- Informs NHSBT commissioning team eg KPIs

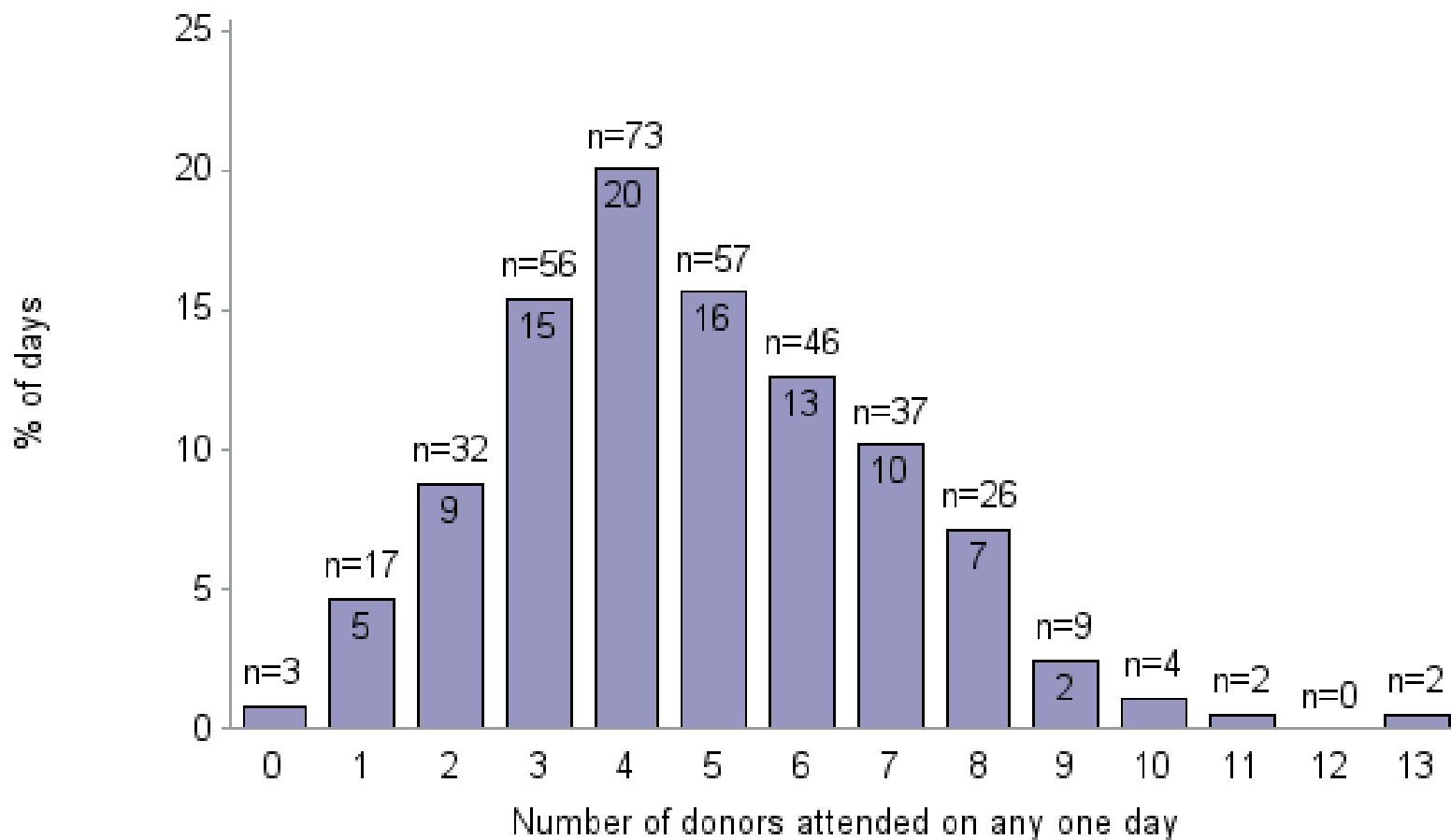
Outline

- Trends in team activity
 - Logistics of the retrieval teams
 - Costs of team attendances
 - The challenge ahead
- 

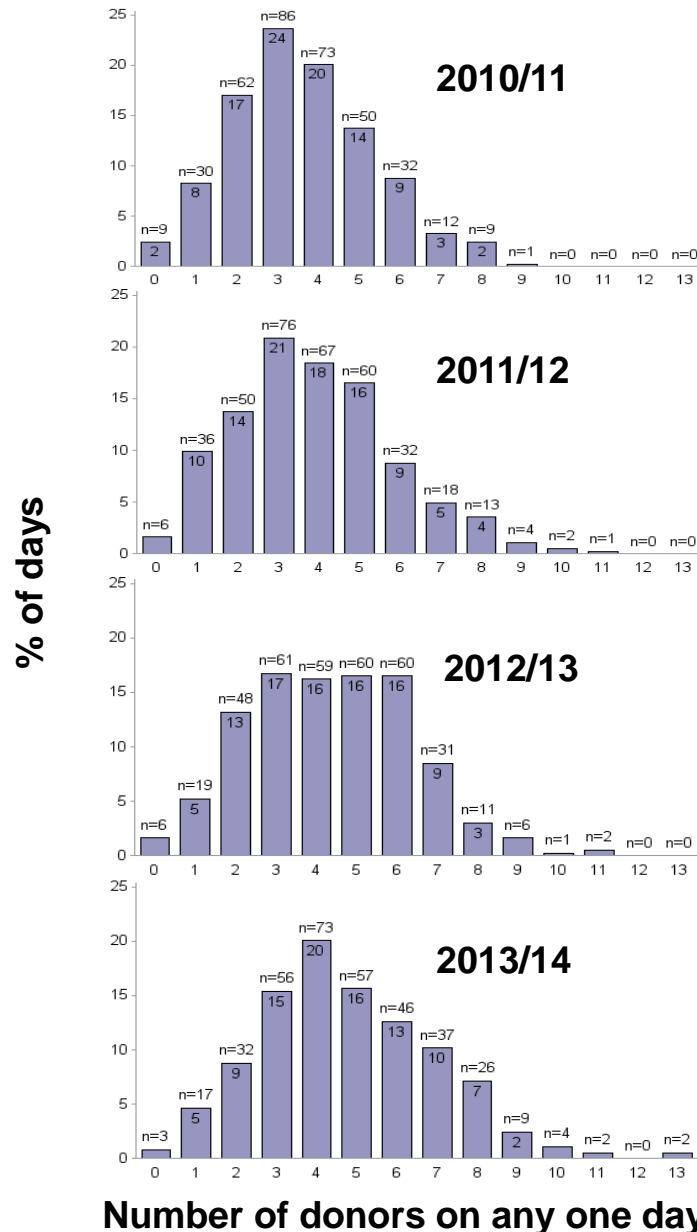
Trends in team activity

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NORS activity – donors attended per day (2013/14 data)



Donors attended per day



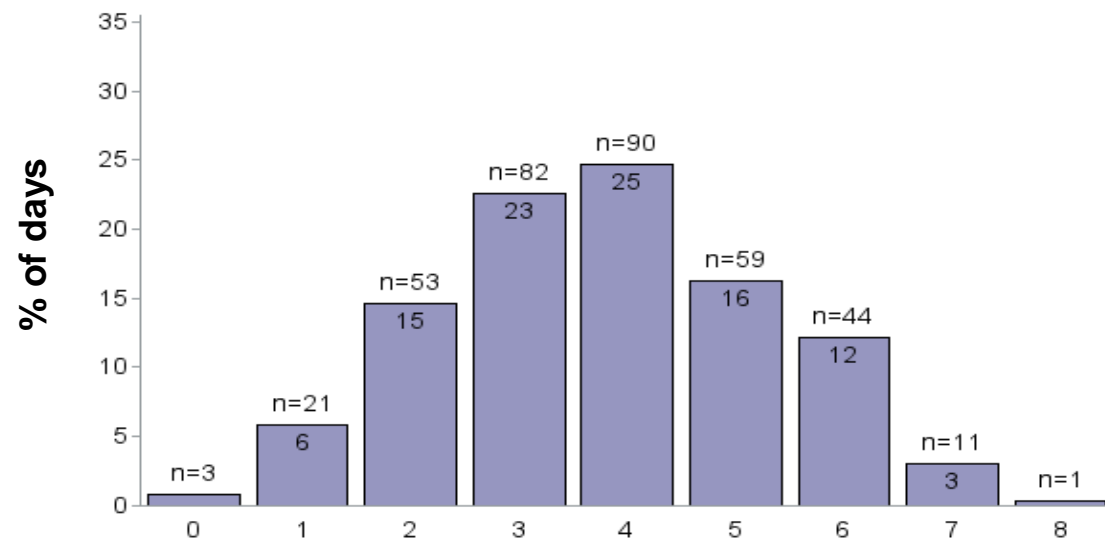
Median=3

Median=4

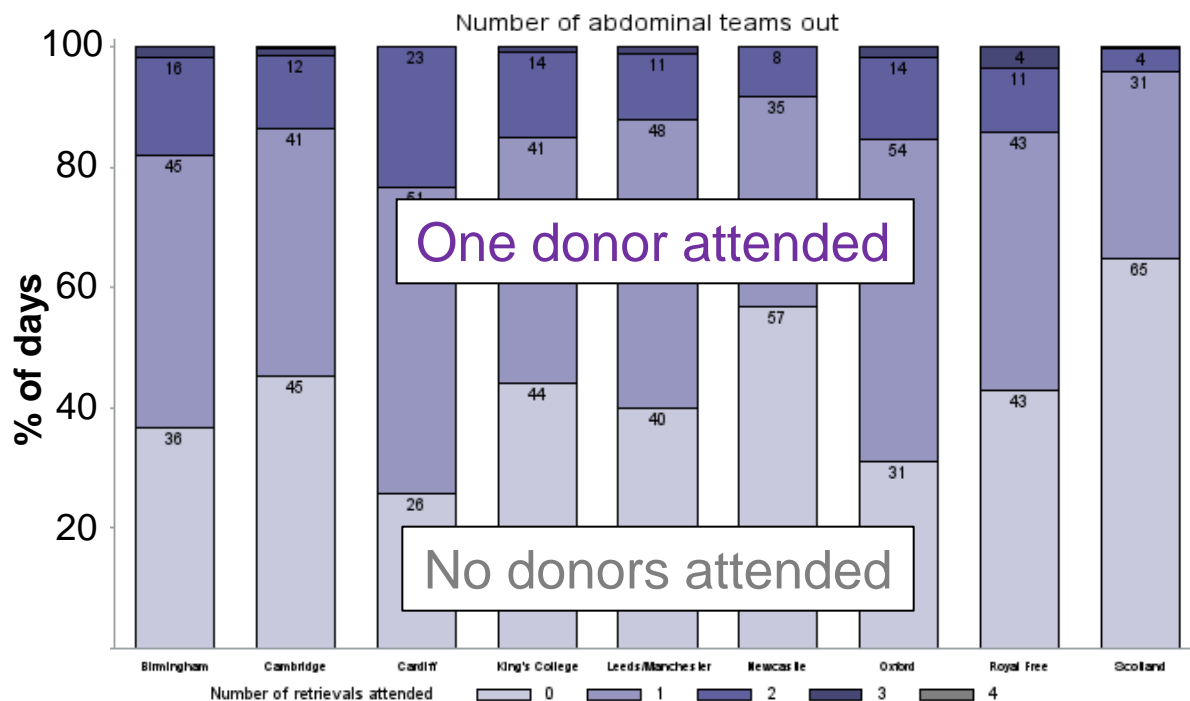
Median=4

Median=5

Abdominal team activity (13/14)

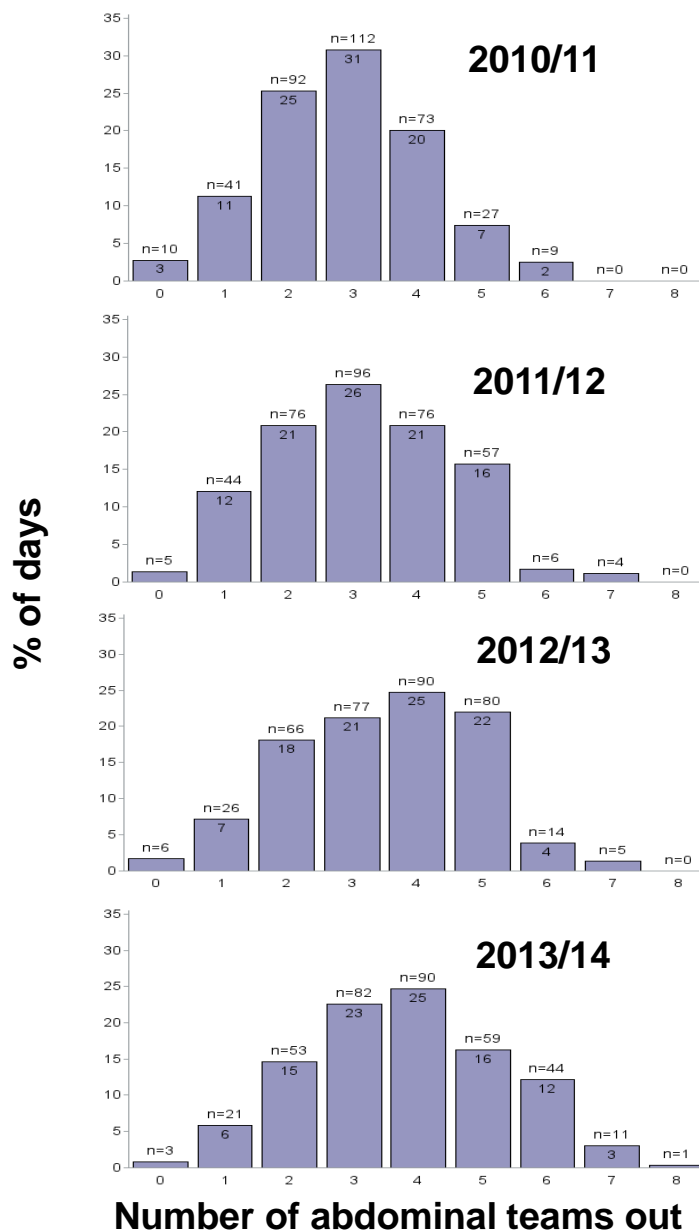


12 occasions
when 7 or 8
teams were out
retrieving



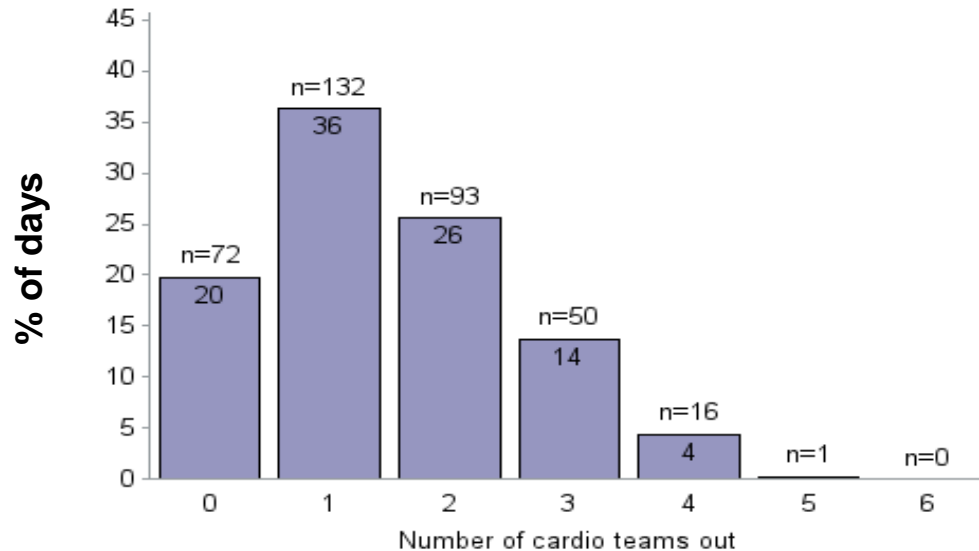
Activity levels vary
across the teams

Number of abdominal teams busy per day

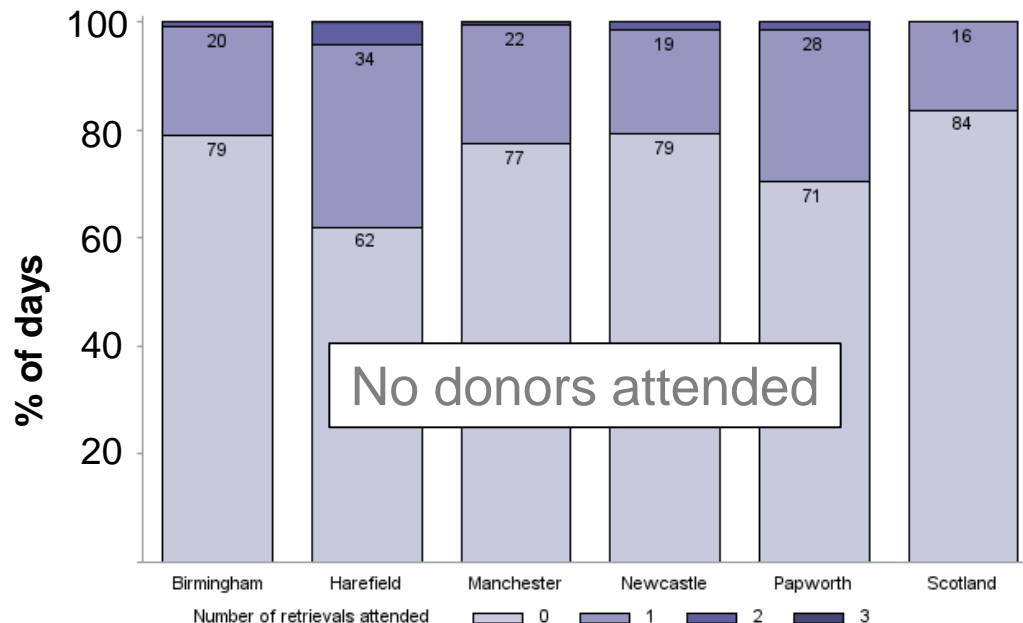


Cardiothoracic team activity

Blood and Transplant



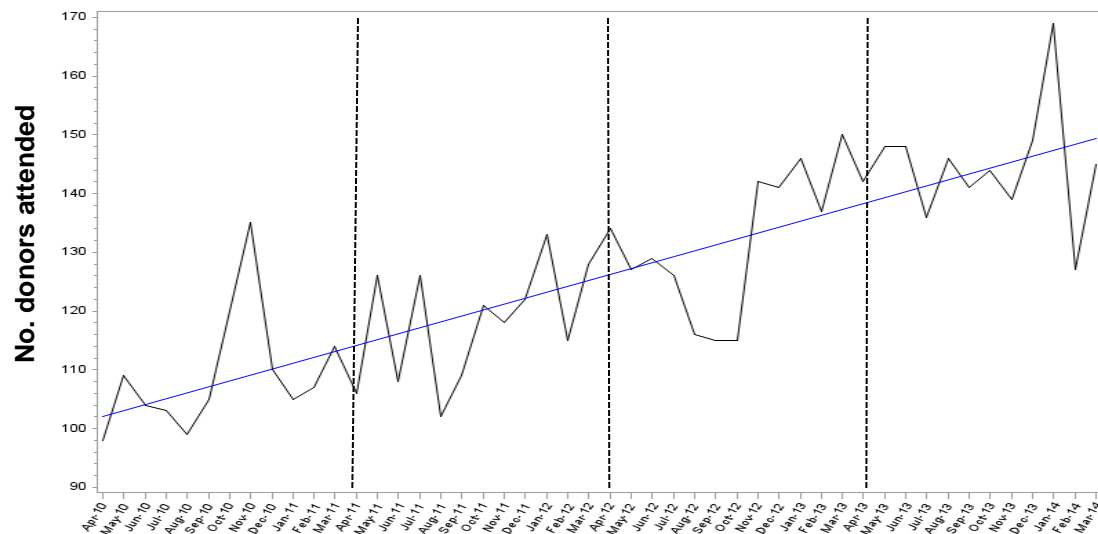
- Less busy than the abdominal teams
- No occasions when all 6 teams out retrieving, one occasion when 5 teams out



Variation in team activity levels

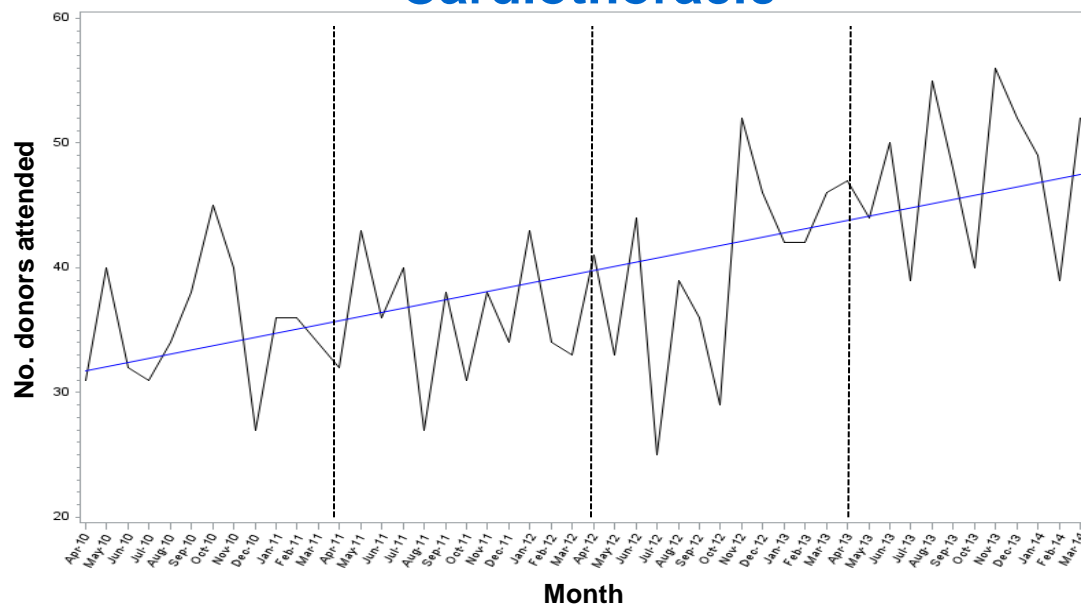
NORS activity- donors attended

Abdominal



~50% increase
since April 2010

Cardiothoracic



~50% increase
since April 2010

Logistics of the teams

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On call sequence for teams by hospital

NATIONAL ORGAN RETRIEVAL SERVICE FROM 1 APRIL 2014 - ABDOMINAL TEAMS

Hospital	1ST	Time	2ND	Time	3RD	Time	4TH	Time	5TH	Time	6TH	Time	7TH	Time
ABERDEEN, ABERDEEN ROYAL INFIRMARY	Scot	149	New	274	Ld/Man	373	Bm/Cf	424	Cam		Ox/RF		LKC	
ABERGAVENNY, NEVILL HALL HOSPITAL	Bm/Cf	90	Ox/RF	156	LKC	157	Cam	194	Ld/Man	198	New	301	Scot	366
ABERYSTWYTH, BRONGLAIS HOSPITAL	Bm/Cf	137	Ld/Man	186	Ox/RF	236	Cam	240	LKC	243	New	292	Scot	343
AIRDRIE, MONKLANDS DISTRICT GENERAL HOSPITAL	Scot	42	New	155	Ld/Man	220	Bm/Cf	271	Ox/RF	368	Cam	373	LKC	376
ASCOT, HEATHERWOOD HOSPITAL	LKC	60	Ox/RF	63	Cam	109	Bm/Cf	131	Ld/Man	217	New	310	Scot	430
ASHFORD, WILLIAM HARVEY HOSPITAL	LKC	55	Ox/RF	62	Cam	101	Bm/Cf	173	Ld/Man	238	New	341	Scot	444
ASHINGTON, WANSBECK GENERAL HOSPITAL	New	21	Scot	119	Ld/Man	126	Bm/Cf	236	Cam	280	Ox/RF	297	LKC	304
ASHTON-UNDER-LYNE, TAMESIDE GENERAL HOSPITAL	Ld/Man	43	Bm/Cf	88	New	150	Cam	175	Ox/RF	185	LKC	192	Scot	226
AYLESBURY, STOKE MANDEVILLE HOSPITAL	Ox/RF	48	LKC	55	Cam	75	Bm/Cf	88	Ld/Man	164	New	267	Scot	366
AYR, THE AYR HOSPITAL	Scot	56	New	162	Ld/Man	228	Bm/Cf	279	Ox/RF	376	Cam	380	LKC	383
BANBURY, HORTON GENERAL HOSPITAL	Ox/RF	74	Bm/Cf	50	LKC	78	Cam	95	Ld/Man	138	New	241	Scot	328
BANGOR, YSBYTY GWYNEDD DISTRICT GENERAL HOSPITAL	Ld/Man	155	Bm/Cf	157	Ox/RF	254	Cam	259	LKC	262	New	262	Scot	312
BARNET, BARNET GENERAL HOSPITAL	Cam	53	Ox/RF	13	LKC	20	Bm/Cf	105	Ld/Man	171	New	274	Scot	376
BARNESLEY, BARNESLEY DISTRICT GENERAL HOSPITAL	Ld/Man	23	Bm/Cf	99	New	129	Cam	149	Ox/RF	160	LKC	167	Scot	246
BARNSTAPLE, NORTH DEVON DISTRICT HOSPITAL	Bm/Cf	170	LKC	215	Ox/RF	215	Cam	261	Ld/Man	279	New	381	Scot	446
BARROW-IN-FURNESS, FURNESS GENERAL HOSPITAL	Ld/Man	122	New	143	Bm/Cf	170	Scot	187	Ox/RF	267	Cam	272	LKC	275
BASILDON, BASILDON HOSPITAL	Cam	66	LKC	39	Ox/RF	42	Bm/Cf	139	Ld/Man	204	New	307	Scot	410
BASINGSTOKE, NORTH HAMPSHIRE HOSPITAL	Ox/RF	57	LKC	55	Cam	106	Bm/Cf	124	Ld/Man	212	New	315	Scot	402
BATH, ROYAL UNITED HOSPITAL	Ox/RF	115	Bm/Cf	92	LKC	116	Cam	162	Ld/Man	200	New	303	Scot	368

Abdominal team
to be called first

On call sequence for teams by hospital

NATIONAL ORGAN RETRIEVAL SERVICE FROM 1 APRIL 2014 - ABDOMINAL TEAMS

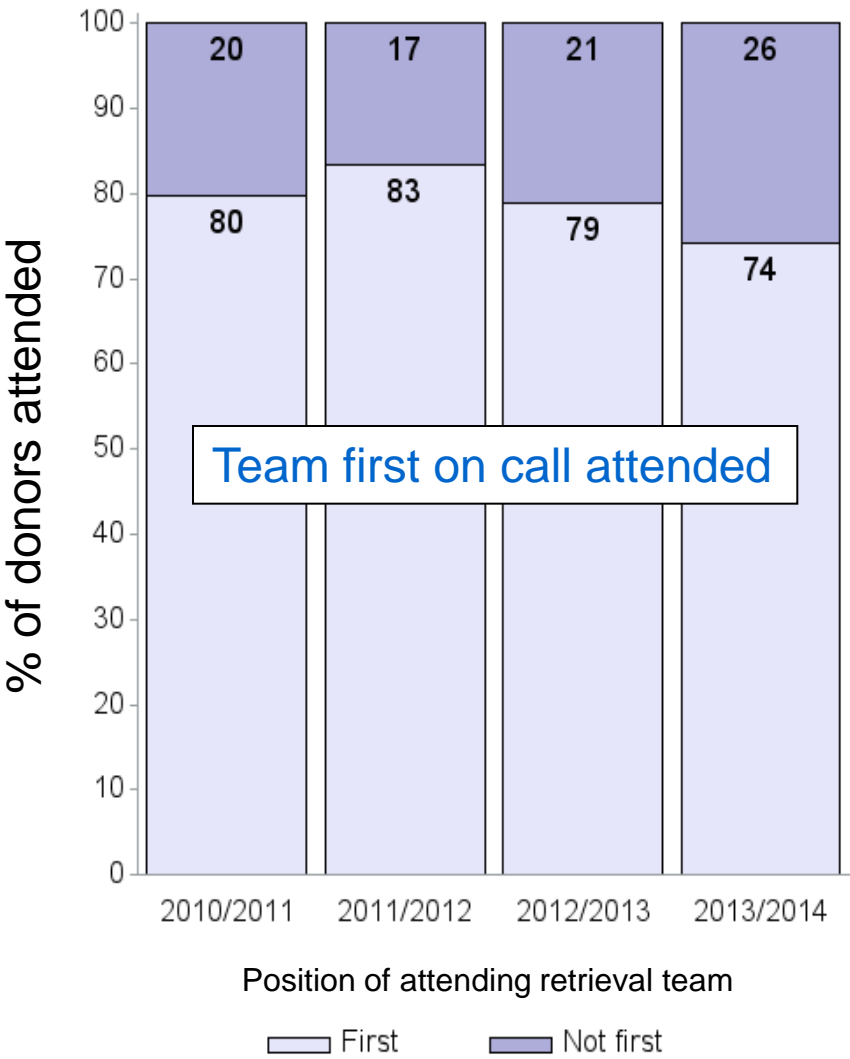
Hospital	1ST	Time	2ND	Time	3RD	Time	4TH	Time	5TH	Time	6TH	Time	7TH	Time
ABERDEEN, ABERDEEN ROYAL INFIRMARY	Scot	149	New	274	Ld/Man	373	Bm/Cf	424	Cam		Ox/RF		LKC	
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AYLESBURY, STOKE MANDEVILLE HOSPITAL	Ox/RF	48	LKC	55	Cam	75	Bm/Cf	88	Ld/Man	164	New	267	Scot	366
AYR, THE AYR HOSPITAL	Scot	56	New	162	Ld/Man	228	Bm/Cf	279	Ox/RF	376	Cam	380	LKC	383
BANBURY, HORTON GENERAL HOSPITAL	Ox/RF	74	Bm/Cf	50	LKC	78	Cam	95	Ld/Man	138	New	241	Scot	328
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BARNSTAPLE, NORTH DEVON DISTRICT HOSPITAL	Bm/Cf	170	LKC	215	Ox/RF	215	Cam	261	Ld/Man	279	New	381	Scot	446
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Abdominal team to
be called second

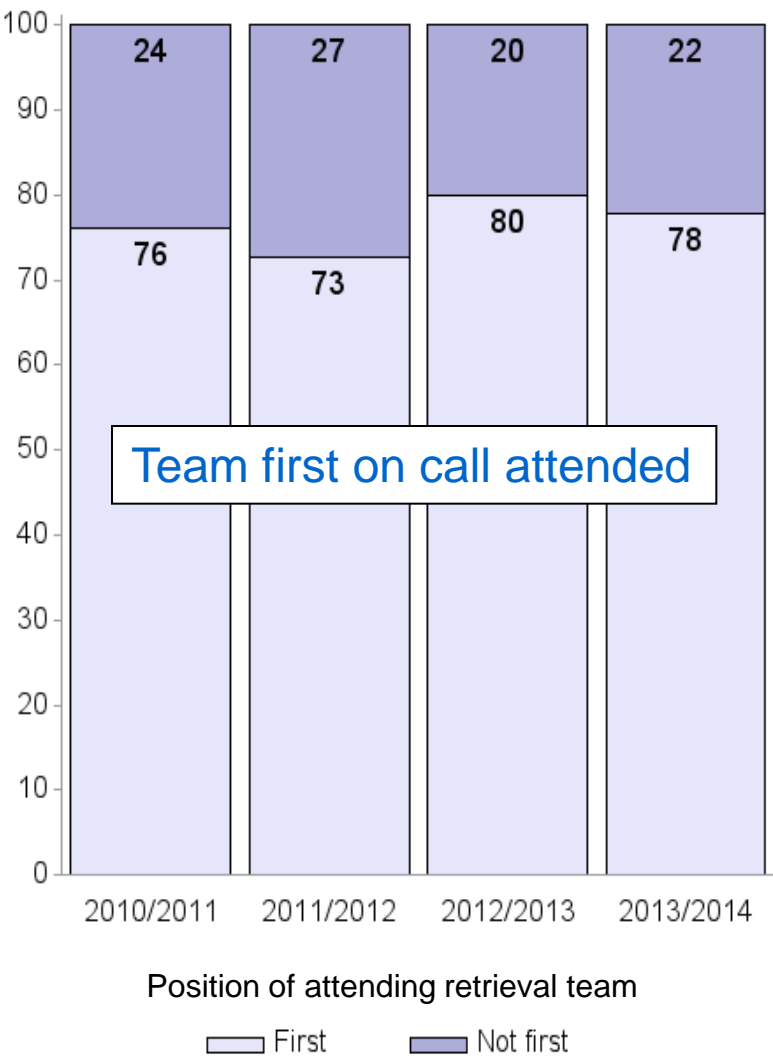
NORS activity – on call position

Blood and Transplant

Abdominal retrievals



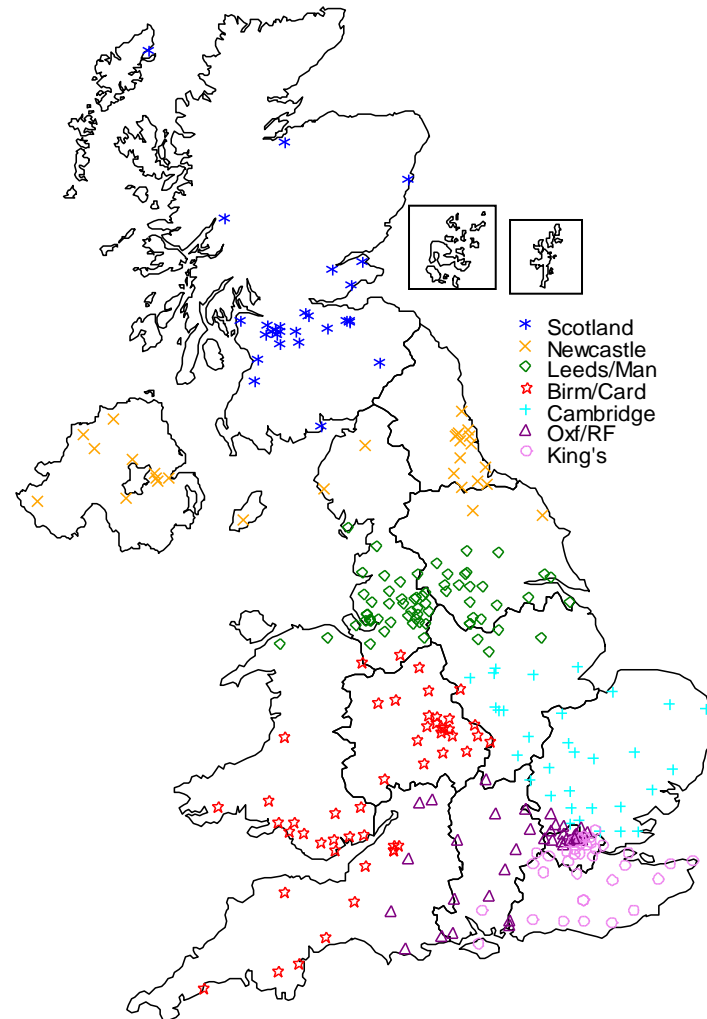
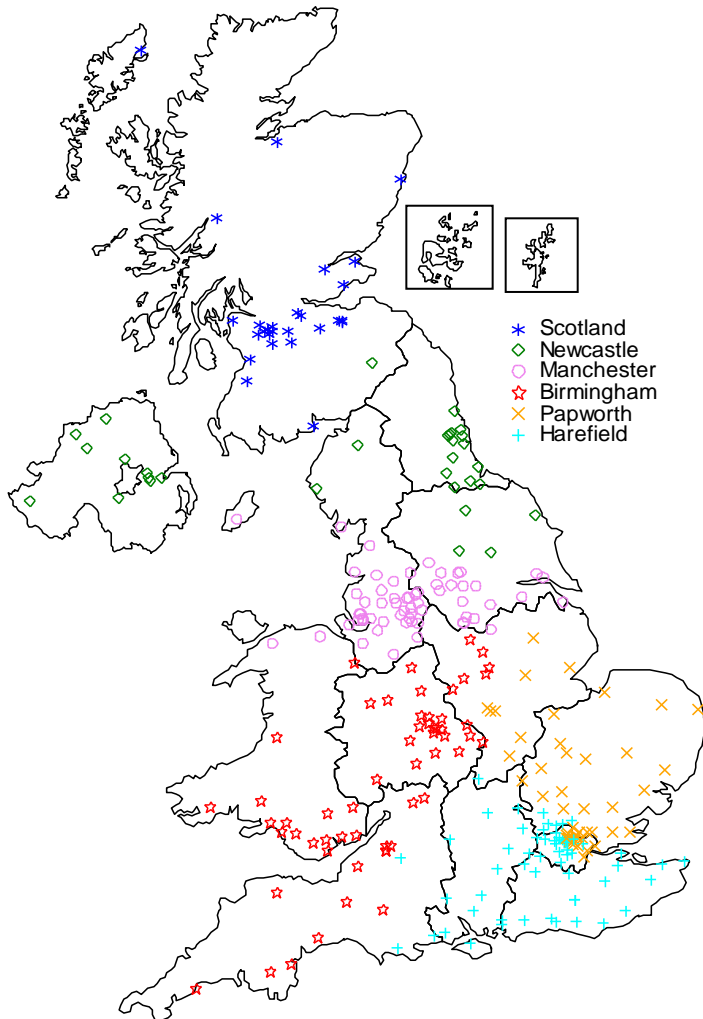
Cardiothoracic retrievals



NORS hospital allocations

Cardiothoracic NORS teams

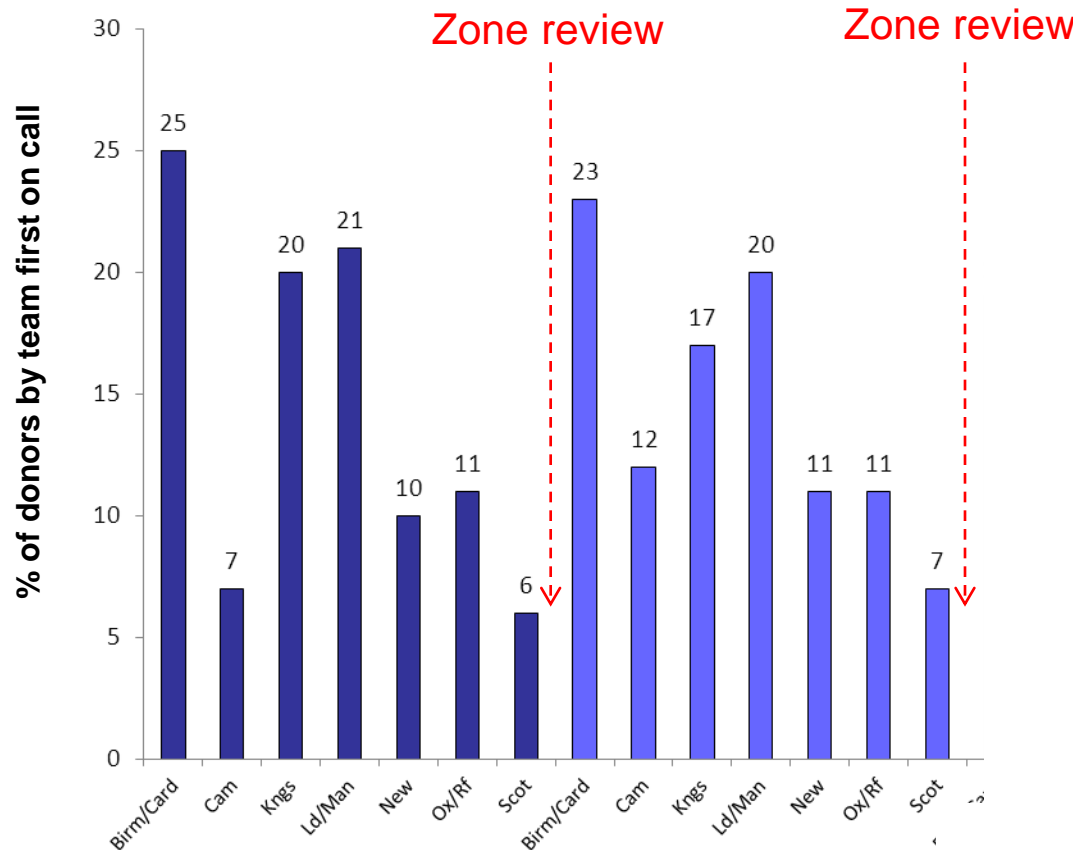
Abdominal NORS teams



Activity levels of teams should be similar. Travel to hospital < 3 hours

Percentage share of donors

Percentage share of attended donors by abdominal team first on call

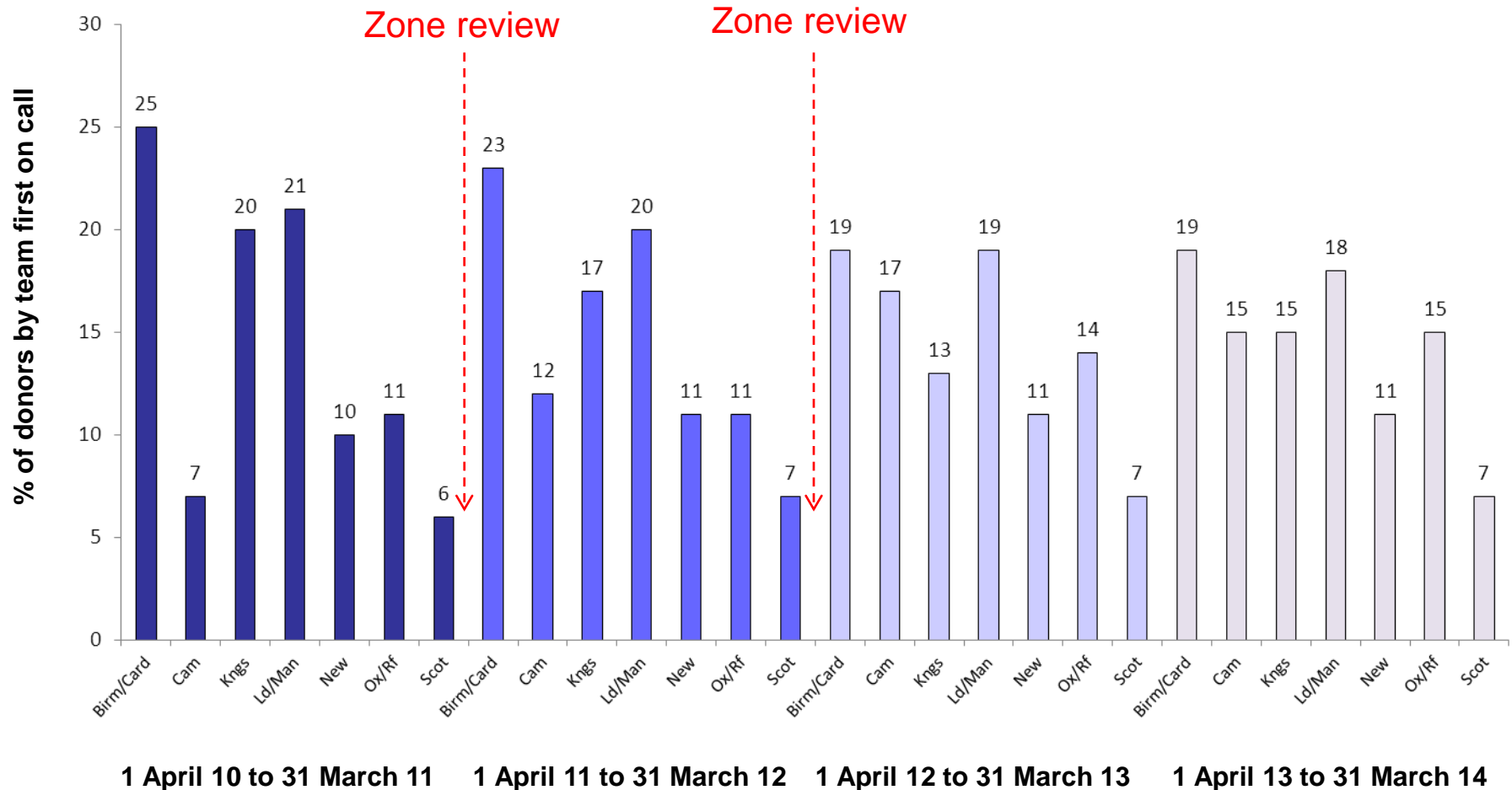


1 April 10 to 31 March 11

1 April 11 to 31 March 12

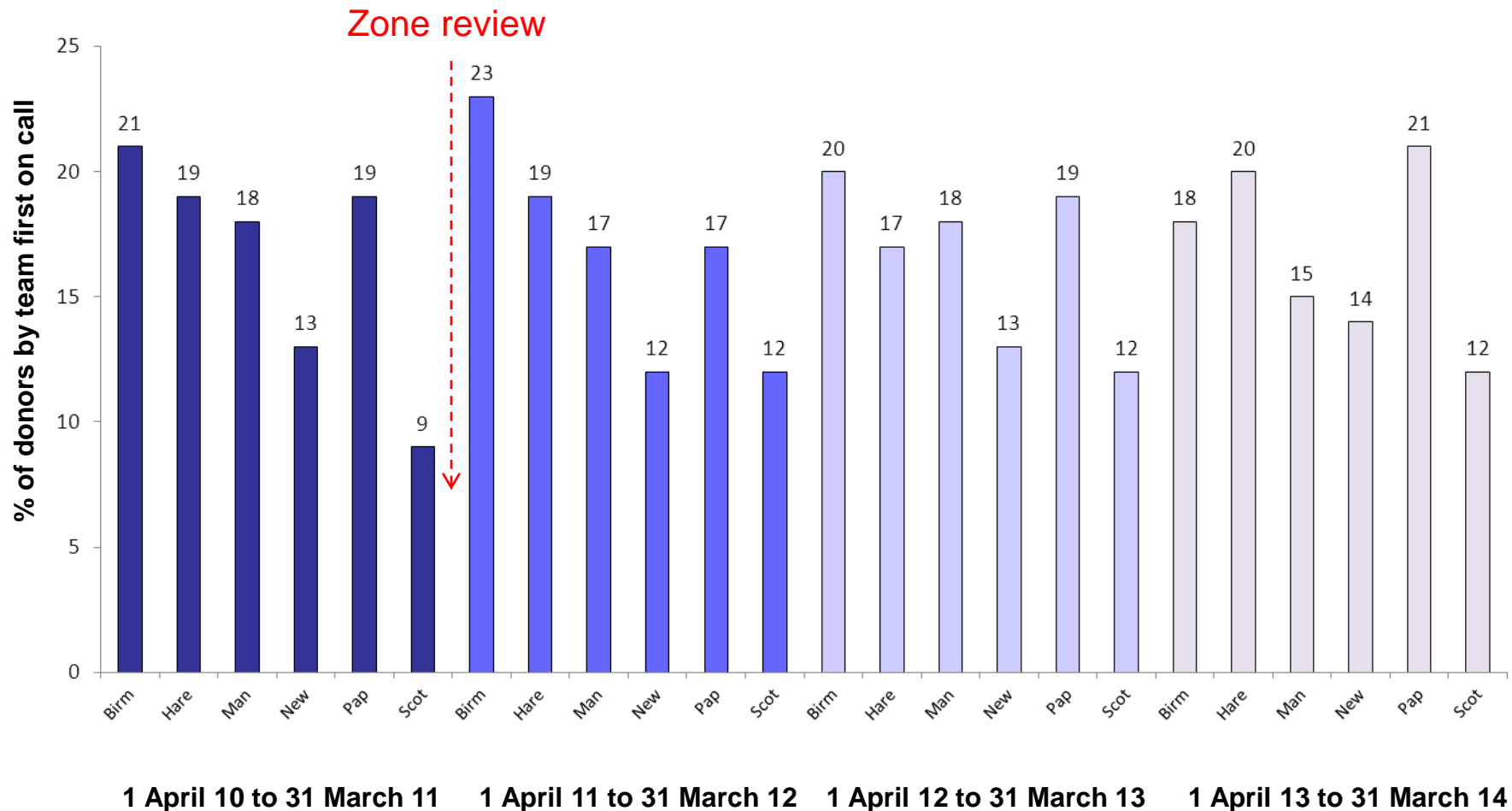
Percentage share of donors

Percentage share of attended donors by abdominal team first on call



Percentage share of donors

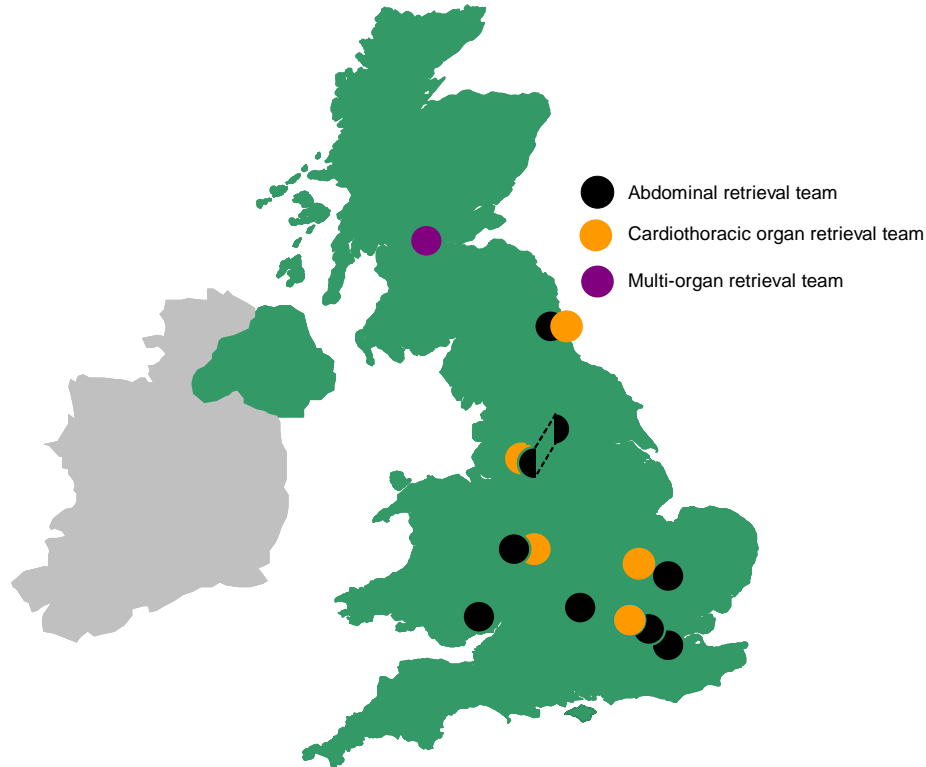
Percentage share of attended donors by cardiothoracic team first on call



NORS team models

8 Abdominal teams:

Birmingham }
 Cardiff }
 Cambridge
 Kings
 Leeds + Manchester
 Newcastle
 Oxford }
 Royal Free }



5 Cardiothoracic teams:

Birmingham
 Harefield
 Manchester
 Newcastle
 Papworth

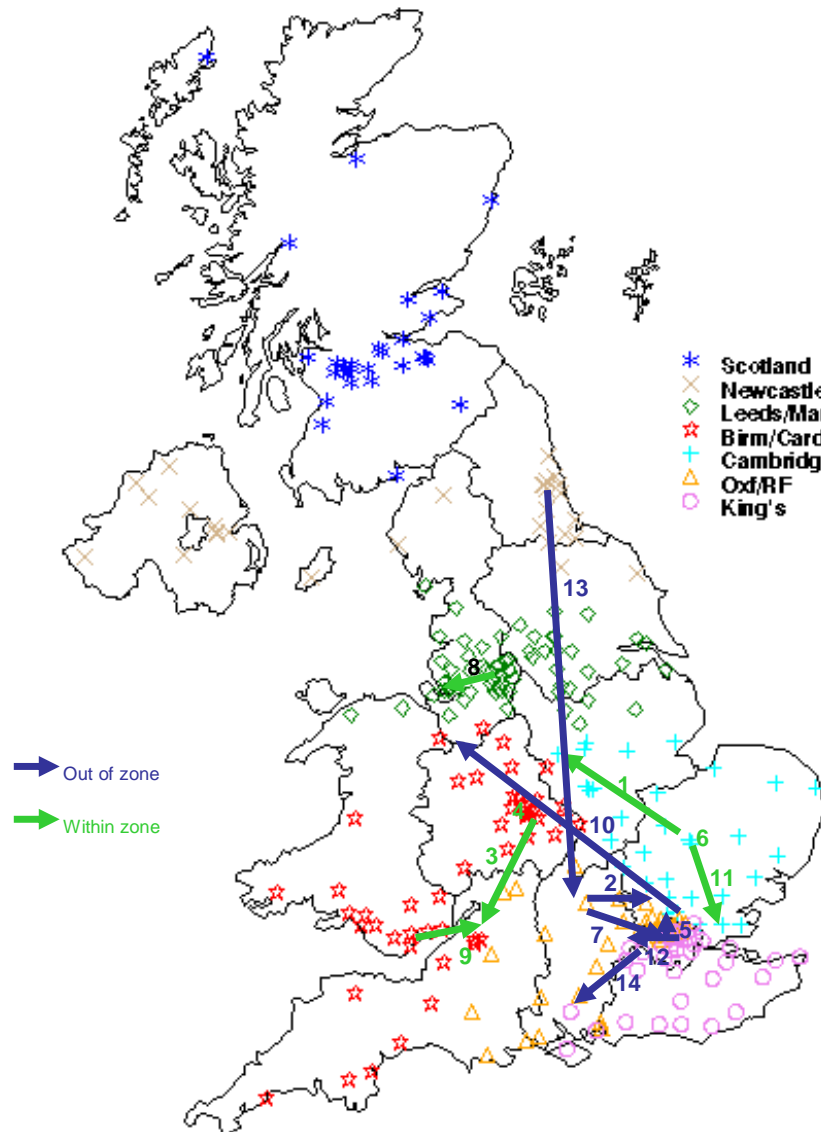
1 multi-organ team:

Scotland

Joint teams that now work on a rota basis for (surgical) on call:

- Birmingham and Cardiff
- Oxford and Royal Free

Example of inefficient team travels



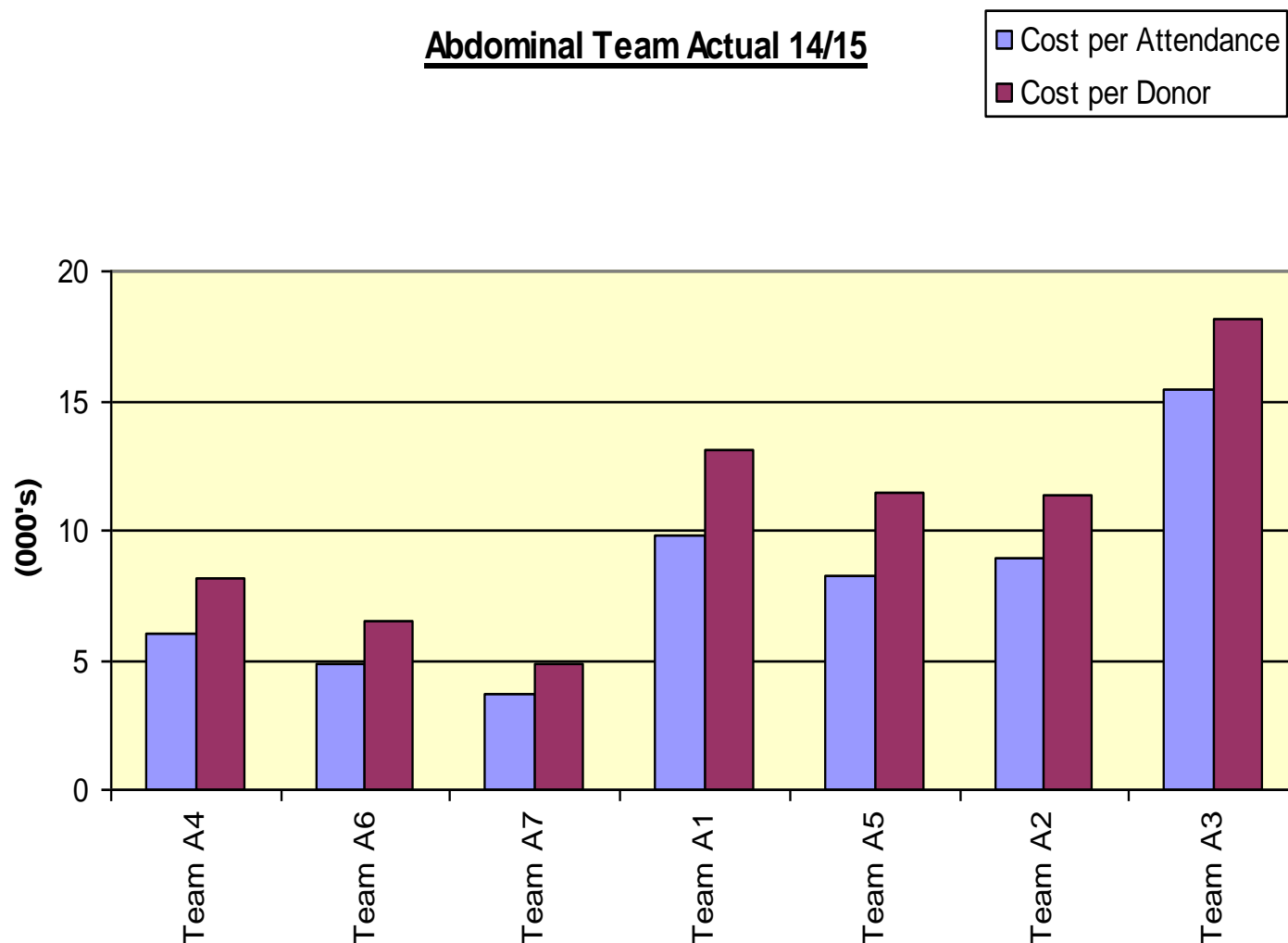
- No central coordination
- SNODs are responsible for organising the organ retrieval
- No knowledge of activity across the rest of the country

Costs of team attendances



Cost per attendance/donor - Abdominal

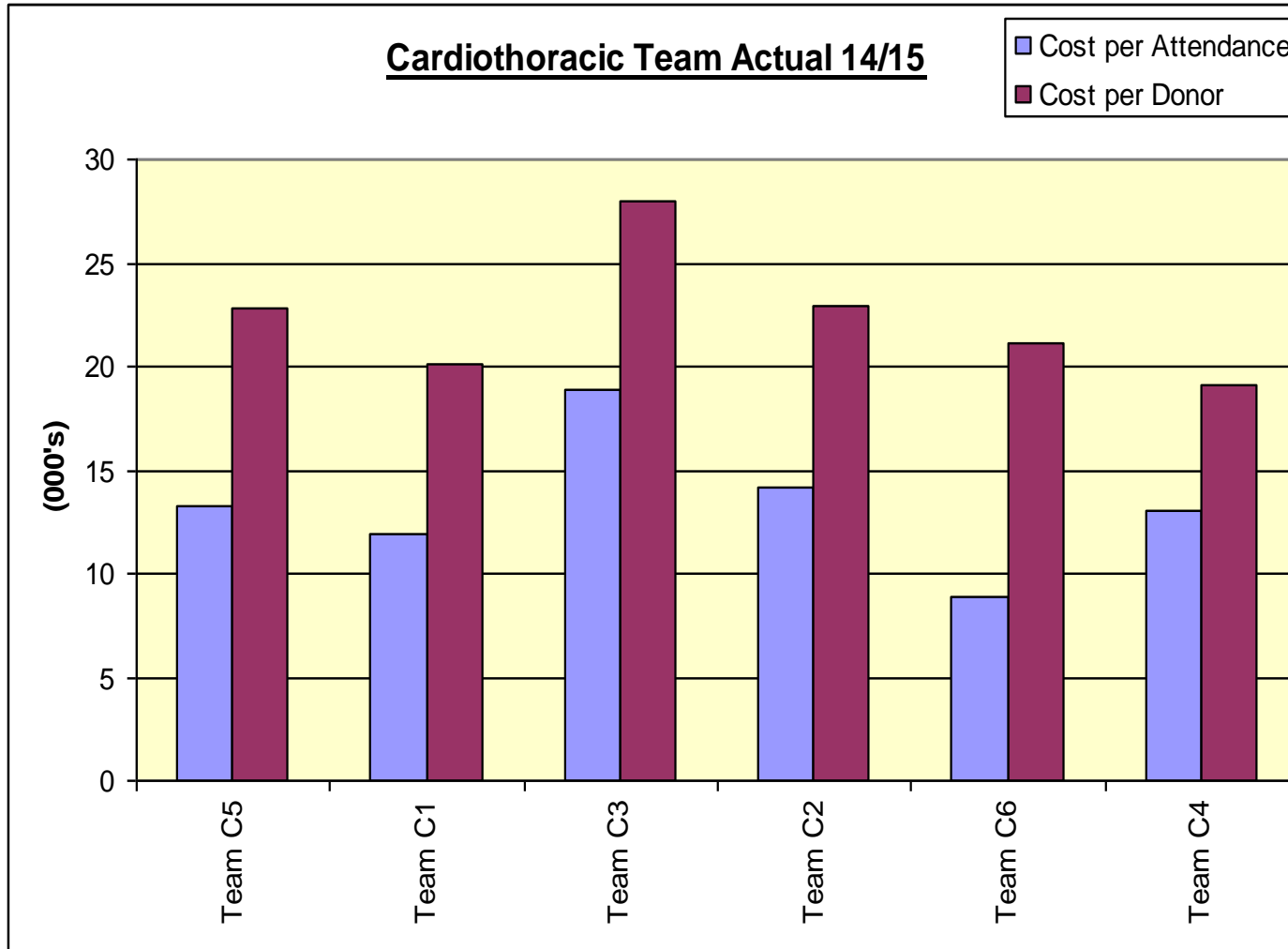
Abdominal Team Actual 14/15



Cost per
attendance
ranges from
£3.7K to
£15.4K

Cost per
actual donor
ranges from
£4.8K to
£18.2K

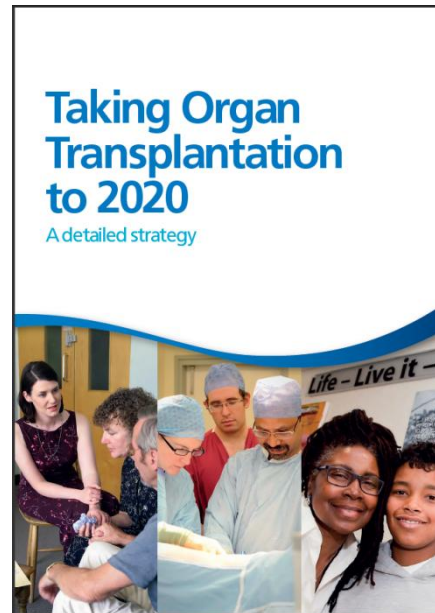
Cost per attendance/donor - Cardiothoracic



Cost per
attendance
ranges from
£8.9K to
£18.9K

Cost per
actual donor
ranges from
£19.1K to
£27.9K

The Challenge Ahead

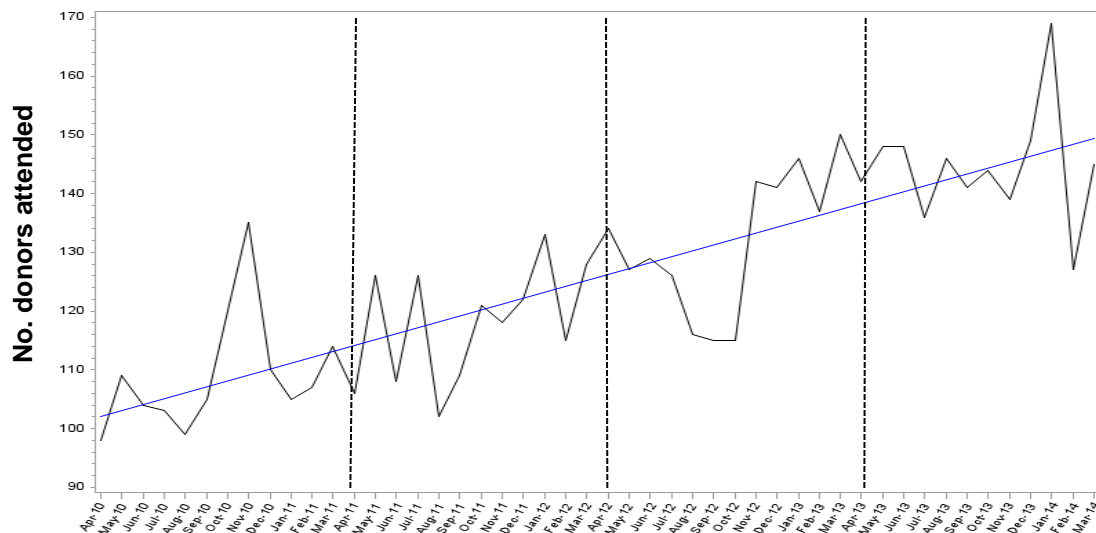


Taking Organ Transplantation to 2020 (TOT2020)

- **Consent/authorisation for organ donation**
 - Aim for consent/authorisation rate above 80% (currently 57%)
- **Deceased organ donation**
 - Aim for 26 deceased donors per million population (pmp) (currently 19 pmp)
- **Organ utilisation**
 - Aim to transplant 5% more of the organs offered from consented, actual donors
- **Patients transplanted**
 - Aim for a deceased donor transplant rate of 74 pmp (currently 49 pmp)

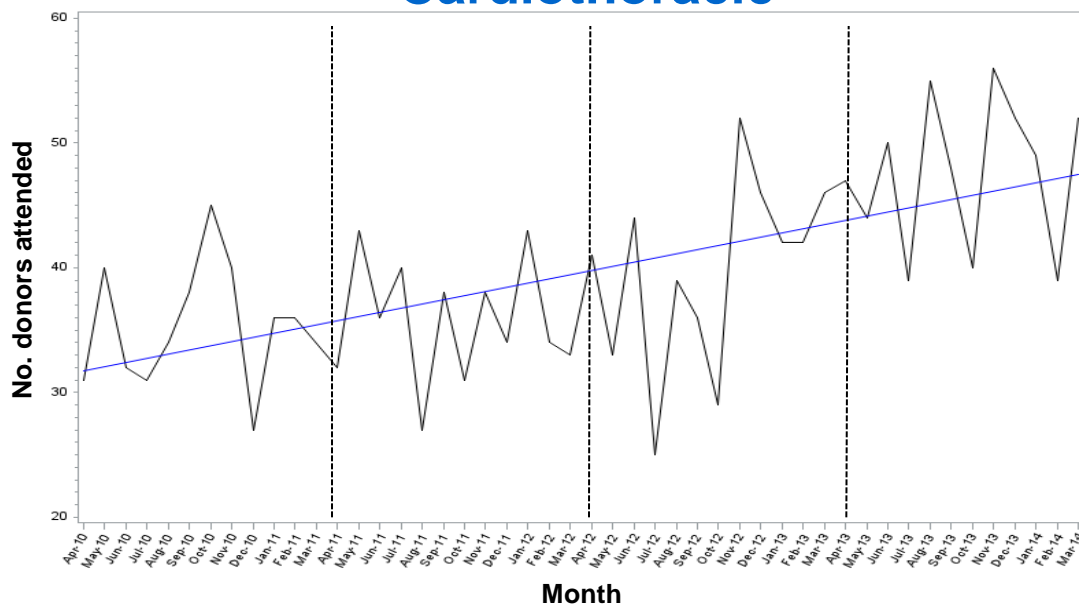
NORS activity- donors attended

Abdominal



~50% increase
since April 2010



Cardiothoracic



2010: 16 donors pmp
2012: 19 donors pmp
2020: 26 donors pmp

~50% increase
since April 2010

TOT2020 projected increases

	2012/2013	2019/2020	
Donors PMP	19	26	 53%
No. of donors	1,212	1,853	
Transplants PMP	49	74	 57%
No. of transplants	3,111	4,899	
Kidney donors	1,148	1,749	
Liver donors	825	1,219	
Pancreas donors	451	591	
Heart donors	142	241	
Lung donors	207	284	

TOT2020 projected increases

	2012/2013	Rough approximations for 2019/2020	% increase
Abdominal team attendances	1,576	2,427	54
No. per 24 hours	4.3	6.7	
Cardio team attendances	478	722	51
No. per 24 hours	1.3	2.0	

When will we reach breaking point?

Roughly assumes:

- Same proportions of proceeding/non-proceeding donors
- Same proportions of abdominal team/cardiothoracic team attendances

Summary

Since NORS first began in 2010/11:

- increase of 50% in number of donor attendances - abdominal and cardiothoracic teams
- Less capacity for growth in the system – usually multiple teams busy per day
- the % share of donor attendances by team more evenly spread than initially

However:

- Team workloads not balanced
- Limited capacity for further growth in abdominal retrievals
- Costs per donor vary across the UK
- Lack of central coordination leads to inefficiency (steps in place to remedy)
- Team models vary – adds complexity and inefficiency?
- In order to meet the TOT2020 strategy aims, activity expected to increase by a further 50%
- Modelling required to investigate capacity needed for future

Are there opportunities to improve...

Capacity?

Efficiency?

Uneven workloads?

Complexity?

A thick, solid blue wave-like graphic that starts at the bottom left, curves upwards towards the right, and then curves back down towards the right, creating a large, open shape at the bottom of the slide.

Discussion

- What is our biggest challenge?
- What do you consider to be the main priorities for improvement?

Introduction to Workstreams

- Workstream One
 - Workforce
- Workstream Two
 - Capacity
- Workstream Three
 - Commissioning (including funding)
- Workstream Four
 - Future Service Requirements

Breakout Groups

- Issues
- Opportunities for improvement
- Areas for recommendation

Lunch

Plenary – feedback from breakout groups

Workforce - Workstream Lead, Roberto Cacciola, Associate Clinical Lead for Organ Retrieval

Aim: To Review the current workforce and staffing arrangements relating to the overall provision of NORS and to provide a written report to the Chair of the Review Board, which makes recommendations as to how working practice might need to change if NHSBT is to deliver its 2020 strategy.

Objectives:

- To benchmark the current UK service, exploring variability.
- To consider the minimum workforce requirement to deliver a 24/7 service, taking into account projected future demand.

Capacity - Workstream Lead, Rachel Johnson, Head of Organ Donation and Transplantation Studies

Aim: To look at the configuration and capacity of the current NORS provision and consider its ability to deliver the expected increase in demand and provide a written report to the Chair of the Review Board, which makes recommendations as to whether the current service configuration might need to change if NHSBT is to deliver its 2020 strategy.

Objectives:

- To model the current service configuration against NHSBT's 2020 strategy and to evaluate its ability to deliver the organisation's vision.
- To consider a broad range of delivery models and provide appraised options for alternative service configuration and/or management.

Commissioning (including funding) - Workstream Lead - Tracey Baker,
Chair of Transplant Manager's Forum

Aim: To review the current commissioning model and provide a written report to the Chair of the Review Board, which makes recommendations as to how practice might need to be changed to enable the service to deliver against NHSBT's 2020 strategy.

Objectives:

- Consider whether the current performance criteria are fit for purpose.
- In light of the findings from the workforce and capacity workstreams, consider the range of commissioning and funding models, which will enable the service to deliver against NHSBT's 2020 strategy.
- To advise how best we ensure there is a commissioning model which reflects the future requirements.

Future Service Requirements - Workstream Lead, Kathleen Preston, Project Board Chair and Gabi Oniscu, Chair of Novel Technologies for Organ Transplantation Steering Group

Aim: Based on the outcomes of the workforce, capacity and commissioning workstreams, and in light of the original principles of NORS, consider what amendments and/or improvements NHSBT needs to make to the way in which it articulates its service requirements to enable NORS to support the organisation in delivering its 2020 strategy.

Objectives:

- To explore both NHSBT and the NORS teams' understanding of the current service requirements, highlighting variation where found.
- To evaluate the current service requirements against the findings of the workforce, capacity and commissioning workstreams, identifying areas for improved clarity.
- To advise how best the service requirements are developed, articulated and managed in the future to ensure the future service configuration has sufficient capacity and flexibility to embrace new technology as appropriate.

Next Steps

- Individual visits to NORS teams
- Submissions invited to: daniel.gosling@nhs.net
- Next Challenge Event on 16 October 2014
- Individual Workstreams due to report back to the NORS Review Project Board in November 2014