National Organ Retrieval Service (NORS) Review

Challenge Event
17 July 2014
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

NHSBT
SRO: Sally Johnson
Sponsor: Karen Quinn

NORS Review Board
Chair: Kathleen Preston

Review Management Team
Manager: Daniel Gosling

Workstreams:
- WS1 Workforce
- WS2 Capacity
- WS3 Commissioning (including funding)
- WS4 Future Service Requirements

Stakeholder Engagement & Communications
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

Phase One:
- Information and opinion gathering

Phase Two:
- Options exploration and appraisal

Phase Three:
- Validation of preferred option

Phase Four:
- Final report

Stakeholder Engagement

Q1 Q2 2014/15
Q2 Q3 2014/15
Q3 2014/15
Q4 2014/15
Background to the National Organ Retrieval Service (NORS)

James Neuberger, Associate Medical Director, NHSBT

Blood and Transplant
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
NORS:
Overview and trends since April 2010

Rachel Johnson
Statistics and Clinical Studies
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
NORS activity – donors attended per day (2013/14 data)
Donors attended per day

2010/11
Median=3

2011/12
Median=4

2012/13
Median=4

2013/14
Median=5

Number of donors on any one day
Abdominal team activity (13/14)

12 occasions when 7 or 8 teams were out retrieving

Activity levels vary across the teams

One donor attended

No donors attended
### Number of Abdominal Teams Busy per Day

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Cardiothoracic team activity

- 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

No donors attended
NORS activity - donors attended

Abdominal

- ~50% increase since April 2010

Cardiothoracic

- ~50% increase since April 2010
Logistics of the teams
### On call sequence for teams by hospital

#### NATIONAL ORGAN RETRIEVAL SERVICE FROM 1 APRIL 2014 - ABDOMINAL TEAMS

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</table>

**Abdominal team to be called first**
On call sequence for teams by hospital

### NATIONAL ORGAN RETRIEVAL SERVICE FROM 1 APRIL 2014 - ABDOMINAL TEAMS

<table>
<thead>
<tr>
<th>Hospital</th>
<th>1ST</th>
<th>Time</th>
<th>2ND</th>
<th>Time</th>
<th>3RD</th>
<th>Time</th>
<th>4TH</th>
<th>Time</th>
<th>5TH</th>
<th>Time</th>
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<th>Time</th>
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<td>424</td>
<td>Cam</td>
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<td>Ld/Man</td>
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<td>New</td>
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<td>LKC</td>
<td>157</td>
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<td>301</td>
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<td>Bm/Cf</td>
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<td>New</td>
<td>315</td>
<td>Scot</td>
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<td>BATH, ROYAL UNITED HOSPITAL</td>
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<td>Bm/Cf</td>
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<td>LKC</td>
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<td>200</td>
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<td>303</td>
<td>Scot</td>
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</tbody>
</table>

Abdominal team to be called second
NORS activity – on call position

Abdominal retrievals

Cardiothoracic retrievals

% of donors attended

Position of attending retrieval team

Team first on call attended

First  Not first

First  Not first


80  83  79  74

24  27  20  22

76  73  80  78
NORS hospital allocations

Cardiothoracic NORS teams

Scotland
Newcastle
Leeds/Man
Birm/Card
Cambridge
Oxf/RF

Abdominal NORS teams

Scotland
Newcastle
Manchester
Birmingham
Papworth
Harefield

Activity levels of teams should be similar. Travel to hospital < 3 hours
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 attended donors by abdominal team first on call

1 April 10 to 31 March 11  1 April 11 to 31 March 12  1 April 12 to 31 March 13  1 April 13 to 31 March 14
Percentage share of attended donors by cardiothoracic team first on call

Zone review

<table>
<thead>
<tr>
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<th>% of donors by team first on call</th>
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</thead>
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<tr>
<td>1 April 10 to 31 March 11</td>
<td>Birmingham: 21, Hare: 19, Harrow: 18, New South Wales: 19, Pap: 12, Scotland: 9</td>
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<tr>
<td>1 April 11 to 31 March 12</td>
<td>Birmingham: 23, Hare: 19, Harrow: 17, New South Wales: 17, Pap: 12, Scotland: 12</td>
</tr>
<tr>
<td>1 April 12 to 31 March 13</td>
<td>Birmingham: 20, Hare: 17, Harrow: 18, New South Wales: 13, Pap: 12, Scotland: 12</td>
</tr>
<tr>
<td>1 April 13 to 31 March 14</td>
<td>Birmingham: 18, Hare: 15, Harrow: 14, New South Wales: 12, Pap: 15, Scotland: 12</td>
</tr>
</tbody>
</table>
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

- 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

Cardiothoracic Team Actual 14/15

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
A detailed strategy
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**

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

~50% increase since April 2010

**Cardiothoracic**

~50% increase since April 2010
# TOT2020 project increases

<table>
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<tr>
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<th>2012/2013</th>
<th>2019/2020</th>
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<tbody>
<tr>
<td><strong>Donors PMP</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. of donors</td>
<td>1,212</td>
<td>1,853</td>
<td>53%</td>
</tr>
<tr>
<td><strong>Transplants PMP</strong></td>
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<tr>
<td>No. of transplants</td>
<td>3,111</td>
<td>4,899</td>
<td>57%</td>
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<td><strong>Kidney donors</strong></td>
<td>1,148</td>
<td>1,749</td>
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<td><strong>Liver donors</strong></td>
<td>825</td>
<td>1,219</td>
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<td><strong>Pancreas donors</strong></td>
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<td><strong>Heart donors</strong></td>
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<td><strong>Lung donors</strong></td>
<td>207</td>
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### TOT2020 projected increases

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

### When will we reach breaking point?

Roughly assumes:
- Same proportions of proceeding/non-proceeding donors
- Same proportions of abdominal team/cardiothoracic team attendances
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?
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.
Commissioining (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