NHS BLOOD AND TRANSPLANT

CARDIOTHORACIC ADVISORY GROUP

UK SCOUT PILOT PROJECT UPDATE
SUMMARY

INTRODUCTION

1 The UK Scout Pilot project is a one-year initiative to assess whether early donor management and assessment by a cardiothoracic retrieval team improves the number of cardiac donations and transplants. It ran between 1 April 2013 and 31 March 2014. This paper provides a summary of the 9 month data available and outlines the proposed next steps.

RESULTS

2 Results are presented for data collected over the first 9 months of the pilot.

3 There was found to be no statistical or clinical difference between the demographics of those attended by a scout (208) and those who were not (108).

4 The retrieval team are more likely to attend if a scout has attended ($p=0.003$). For cases when the retrieval team has attended, the retrieval team are more likely to retrieve ($p=0.02$).

5 The number of heart transplants has increased dramatically since the scout project was initiated although further work is required to establish the direct causal effect of scout attendance upon number of transplants.

NEXT STEPS

6 A questionnaire has been circulated to collect opinions on whether the scout project affected retrieval and more importantly to ask what it was the scout did that caused such an effect, if any.

7 Data on the scout forms are currently being entered on to a database at NHSBT.

8 The results from the questionnaire and the scout forms will be used to guide the forthcoming statistical analysis. A multivariate statistical model will be developed to model the probability of heart donation.

9 The questionnaire results and the modelling results will be used to inform decisions over how the future of scouting should continue, including funding decisions. This will be discussed at the ODT Senior Management Meeting (SMT) on 22 July 2014.

Jenny Lannon
Statistics and Clinical Studies **April 2014**

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INTRODUCTION

1 The UK Scout Pilot project is a one year initiative to assess whether early donor management and assessment by a cardiothoracic retrieval team impacts on the number of cardiac donations and transplantation. It ran between 1 April 2013 and 31 March 2014.

2 The key aims of the project are to:
- increase the number of donor hearts retrieved and transplanted
- improve the quality of donor hearts retrieved.

3 Scouts are members of the retrieval team and are trained to assess and optimise a donor. Criteria for inclusion/ exclusion are provided in slide 1.

4 This paper presents the preliminary results from the first 9 months of data collected over the period of the pilot project. These results are taken from the presentation given by Jenny Lannon at the International Society for Heart and Lung Transplantation Annual Meeting on 13 April 2014.

5 The outstanding issues to address and planned next steps are also presented.

RESULTS

Slide 1.

The Scout Pilot

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- April to December 2013 (9 months)
- **Research question:** Does scout attendance lead to a higher number of hearts retrieved and transplanted?
- **Cohort of 'possible' heart donors**:
  - All UK DBD donors
  - Age <65 years
  - Weight ≥ 30 kg
  - Consent for heart and lung donation given
  - No past history of cardiothoracic disease
  - Cause of death was not MI or IHD
- Scout will only attend if donor is within 2 hrs travel distance ('**in zone**')

Slide 2.

Scout Activity

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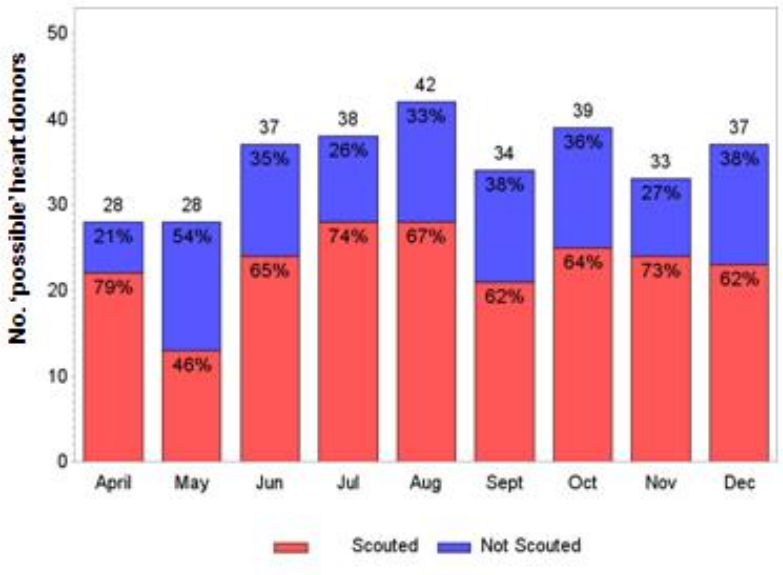
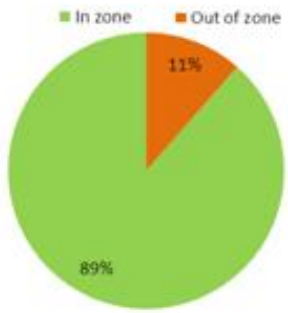


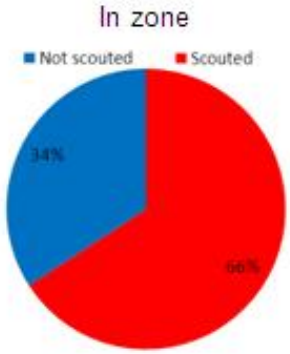
Slide 3.

Scout Activity

NHS Blood and Transplant

- Study period Apr-Dec 2013
- Total number of 'possible' heart donors n = 357
- 'Possible' heart donors within scout zone n = 316
- 'Possible' heart donors within zone attended by a scout n = 208





Slide 4.

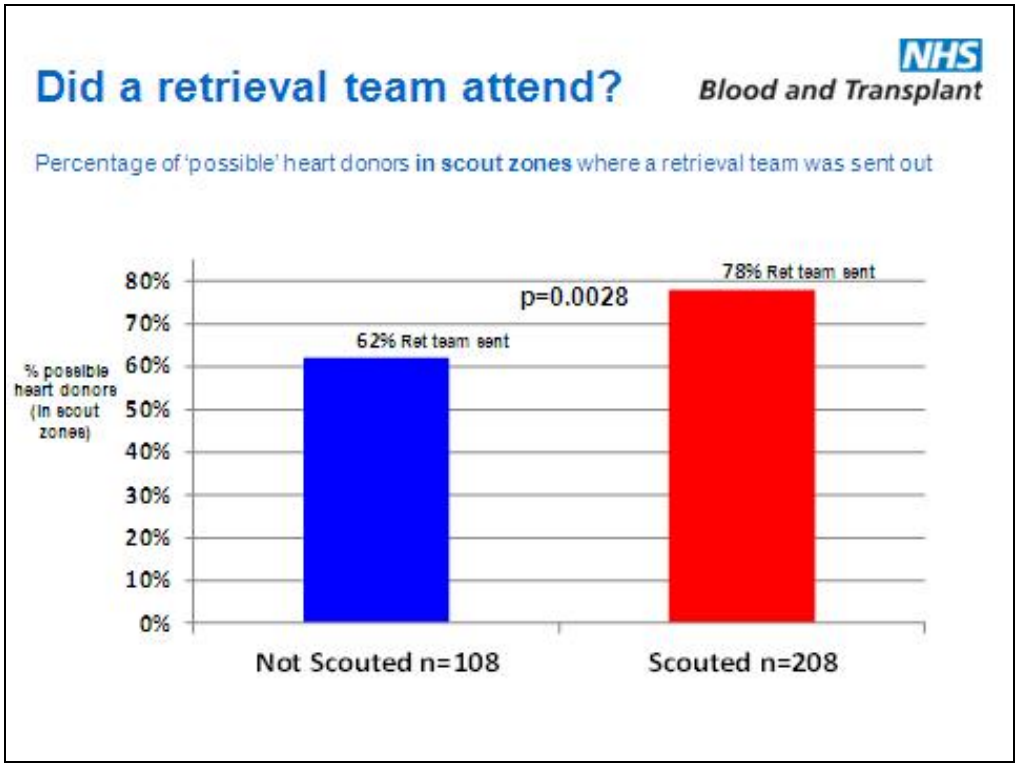
Donor characteristics

NHS Blood and Transplant

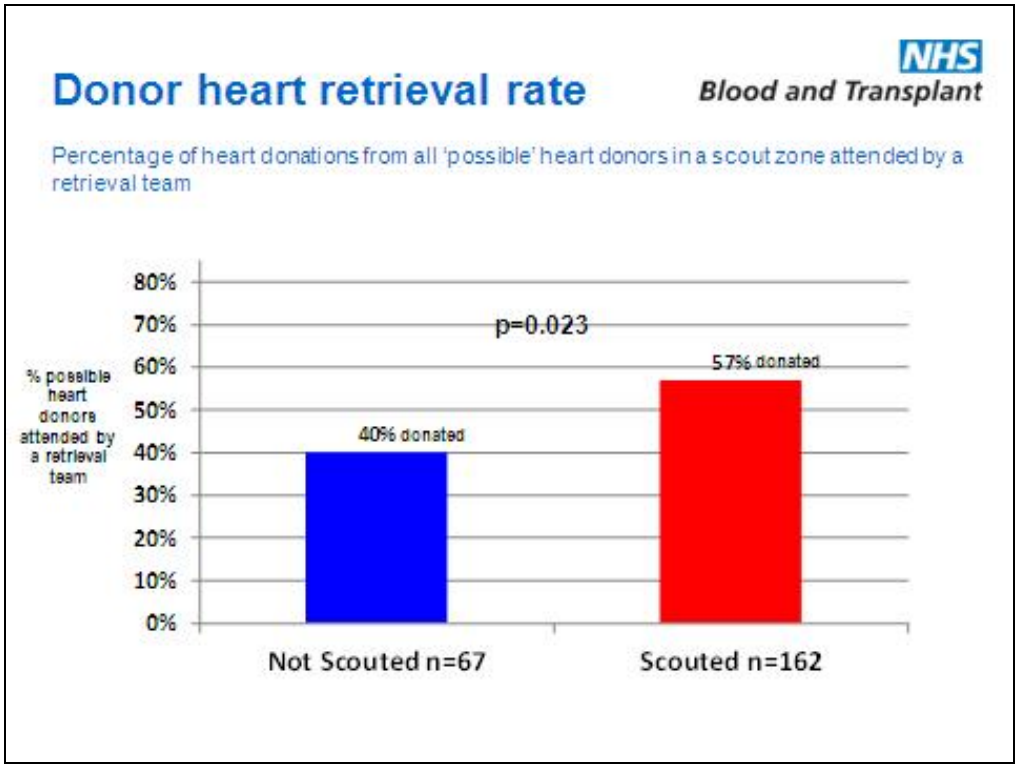
- Compare characteristics of 'possible' heart donors between those attended by scouts and those not attended by scouts

	Mean (sd)		
	Scouted (n=208)	Not scouted (n=108)	P-value
Age (years)	41 (13.9)	43 (13.9)	0.3
Weight (Kg)	79 (17.7)	74 (17.9)	0.03
Average systolic blood pressure (mmHg)	122 (19.6)	120 (23.0)	0.47
Average diastolic blood pressure (mmHg)	71 (12.8)	71 (13.4)	0.75
PCO_2 (KPa)	5.5 (1.1)	5.6 (1.3)	0.53
PO_2 (KPa)	46 (17.0)	47 (19.0)	0.51
Number of drugs	6.7 (2.7)	6.2 (2.7)	0.16

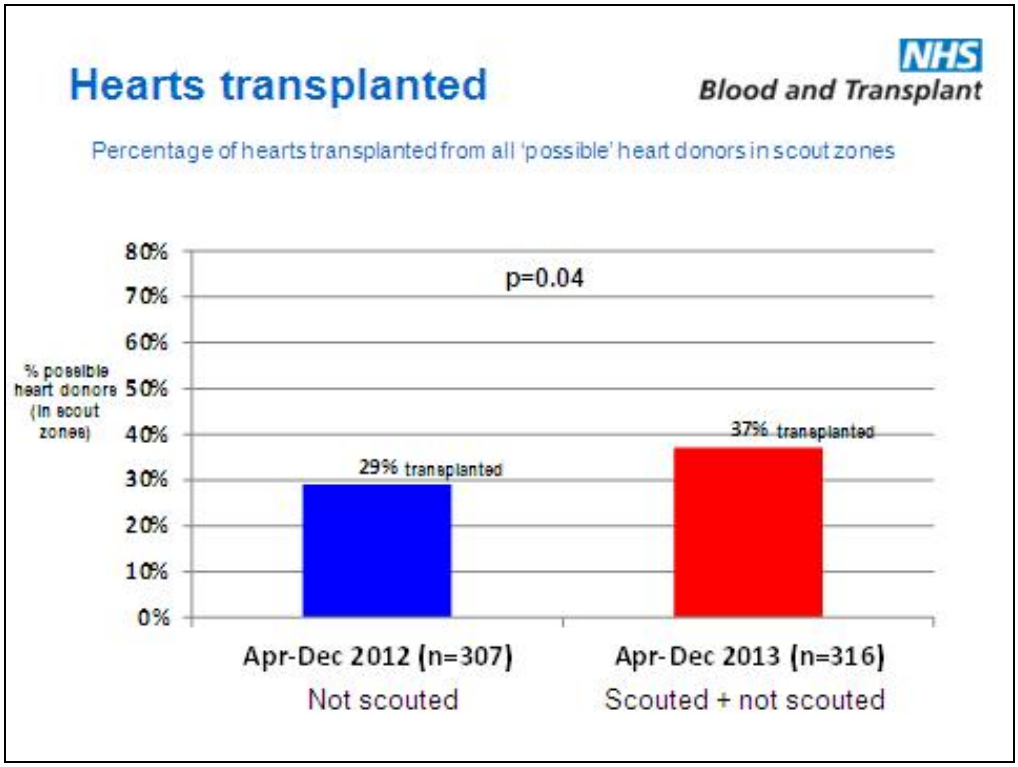
Slide 5.



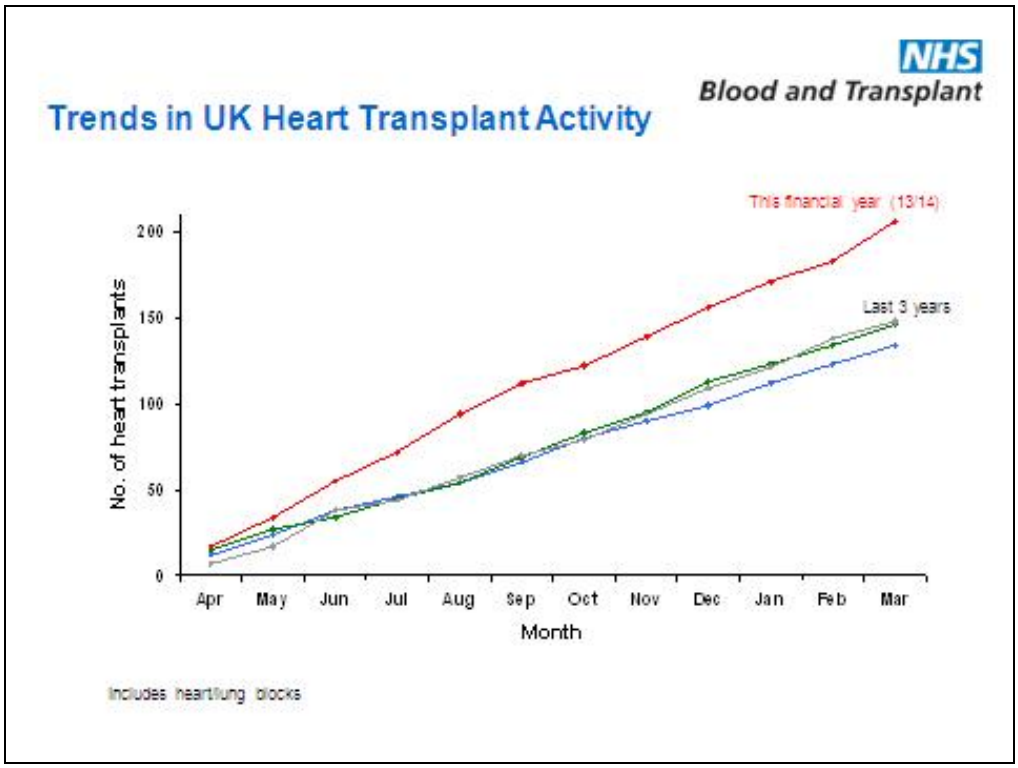
Slide 6.



Slide 7.



Slide 8.



Slide 9.

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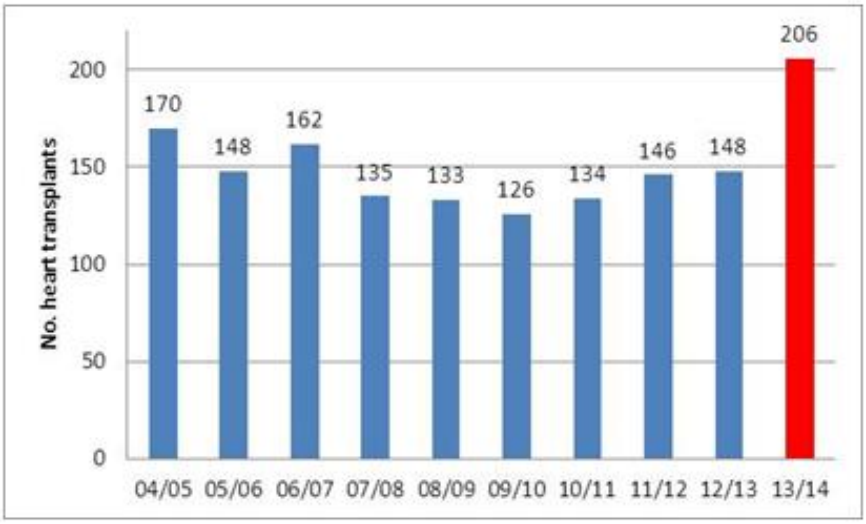
Trends in UK Heart Transplant Activity



Includes heart/lung blocks

Slide 10.

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Conclusions

Results so far suggest impacts of scout attendance are;

- Retrieval team more likely to attend (p=0.003)
- Retrieval team more likely to retrieve (p=0.02)
- Number of hearts transplanted has increased

Further work required;

- What specifically does the scout do which causes these trends?
- How does the scout impact the quality of the donor heart?

OUSTANDING ISSUES

6 The Scout pilot project identified a number of issues:
a. Analysis of the current data will not indicate **what** the scout does to influence the number of hearts retrieved.
b. Analysis of the current data will not indicate whether or how the scout impacts on the **quality** of the donor heart (longer term project).
c. Isolated incidents regarding clinical competencies of the scout highlighted the need for objective (and national) competency assessment.

NEXT STEPS

7 A questionnaire was sent on 17 March 2014 to:

- Retrieval surgeons
- Scouts
- SNODS
- CLODS
- Managers (Regional/team, NORS and transplant)
- ICU medical staff
- ICU nursing staff

The deadline for responses was 14 April 2014 and results are currently being collated.

8 The main aim of the questionnaire was to ask for opinions on whether the scout project affected retrieval and more importantly to ask what it was the scout did that caused such an effect, if any.

9 For every scout attendance, the scout is required to complete a form providing information on timings and patient characteristics before and after optimisation. These forms are currently being entered on to a database at NHSBT.

10 The results from the questionnaire and the scout forms will be used to guide the forthcoming statistical analysis. A multivariate statistical model will be developed to model the probability of heart donation. The key factor to test in the model will be whether or not a scout attended. Other factors based on 'what it is the scout does' from the questionnaire results can also be tested by extracting data from the scout forms and the UK Transplant Registry at NHSBT.

11 The questionnaire results and the modelling results will be used to inform decisions over how the future of scouting should continue, including funding decisions. This will be discussed at the ODT Senior Managers Meeting (SMT) on 22 July 2014.

12 The timeline for future work is suggested as follows:

March – April 2014: Survey to all interested parties to collect additional qualitative data regarding the impact of scouts on the care of potential donors.

April 2014: Liaise with transplant managers and NORS teams to agree that the scout project continues until final data analysis and recommendations can be made.

April – June 2014: Detailed analysis of the data to assess:
a. Impact on cardiac retrievals and transplantation.
b. Impact on other organs: lungs retrievals and transplantation, in comparison to non-scouted patients.
c. Cost implications

27th June 2014: Recommendations to CRG for comment

22nd July 2014: Recommendations (revised as appropriate following advice from CRG) to ODT Senior Management Team

August 2014: Subject to agreement by CRG and ODT SMT, proceed with implementation of recommendations.

Jenny Lannon
Statistics and Clinical Studies **April 2014**