Approved **LAG(M)(16)2 (Am)**
10.05.17

NHS BLOOD AND TRANSPLANT
ORGAN DONATION & TRANSPLANTATION DIRECTORATE

MINUTES OF THE THIRTIETH MEETING OF THE LIVER ADVISORY GROUP HELD ON WEDNESDAY 23RD NOVEMBER 2016 LONDON

PRESENT:

Prof John O'Grady	**Chairman**
Prof Derek Manas	Deputy Chair, BTS Rep and Surgeon, The Freeman Hospital Newcastle upon Tyne
Ms Helen Aldersley	Recipient Co-ordinator Representative
Dr Elisa Allen	Statistics and Clinical Studies
Dr Varuna Aluvihare	Physician, King's College Hospital
Dr Susan Beath	Paediatric Hepatologist, Birmingham
Ms Hazel Bentall	Lay Member
Mr Andrew Broderick	Transplantation Support Services, ODT
Mr John Crookenden	Liver Transplant Consortium
Prof John Forsythe	Associate Medical Director, NHSBT
Prof Peter Friend	Chair of Bowel Advisory Group
Mr Tom Gallagher	Deputy for Mr Emir Hoti, St Vincent's Hospital, Dublin
Mr Paul Gibbs	Surgeon, Addenbrooke's Hospital, Cambridge
Dr Alex Gimson	Physician, Addenbrooke's Hospital, Cambridge
Dr Tassos Grammaticopoulos	Physician, King's College Hospital, London
Prof Nigel Heaton	Surgeon, King's College Hospital, London
Mr Ernest Hidalgo	Surgeon, St James's University Hospital, Leeds
Dr Andrew Holt	Deputy for Dr James Ferguson, Queen Elizabeth Hospital, Birmingham
Dr Mark Hudson	Physician, Freeman Hospital, Newcastle
Dr Rebecca Jones	Physician, St James's University Hospital, Leeds
Ms Emma Lawson	Deputy for Ms Susan Richards, RM Organ Donation, NHSBT
Dr Joanna Leithead	Physician, Addenbrooke's Hospital, Cambridge
Ms Wendy Littlejohn	Recipient Co-ordinator Representative
Dr Alastair MacGilchrist	Physician, Royal Infirmary of Edinburgh
Prof Paolo Muiesan	Surgeon, Queen Elizabeth Hospital, Birmingham
Prof Rutger Ploeg	National Clinical Lead for Organ Retrieval, ODT
Mr James Powell	Surgeon, Royal Infirmary, Edinburgh
Dr Sanjay Rajwal	Paediatric Hepatologist
Mrs Anne Sheldon	Transplantation Support Services
Ms Alison Taylor	Child Liver Disease Rep & Liver Patient Group Co Chair
Dr Douglas Thorburn	Physician, Royal Free Hospital and BLTG Rep
Ms Helen Tincknell	Lead Nurse – Recipient Co-Ordinator
Mrs Sarah Watson	Deputy for Dr Edmund Jessop, NHS England

IN ATTENDANCE:

Mrs Kamann Huang	Clinical & Support Services, ODT

ACTION

APOLOGIES & WELCOME

Mr Charles Imber, Prof John Dark, Dr James Ferguson, Prof Sue Fuggle, Mr Emir Hoti, Dr Diarmaid Houlihan, Dr Edmund Jessop, Mrs Sally Johnson, Mr Andrew Langford, Mr Jonathan McShane, Ms Susan Richards and Mr Anthony Snape.

ACTION

1 DECLARATIONS OF INTEREST IN RELATION TO AGENDA – LAG(16)2

1.1 There were no declarations of interest.

2 MINUTES OF THE MEETING HELD ON 11 MAY 2016 - LAG(M)(16)1

2.1 **Accuracy**

2.1.1 The minutes of the previous meeting were agreed as a correct record.

2.2 **Action points – LAG(AP)(16)2**

2.2.1 All action points have been completed or are referred to as an Agenda Item.

2.3 Matters arising, not separately identified

2.3.1 J O'Grady will be Chair of LAG for another 2 years from October 2016. D Manas will remain as deputy chair for another two years. C Watson has been re-instated as Chair of KAG for another 2 years from October 2016.

3 ASSOCIATE MEDICAL DIRECTOR'S REPORT

3.1 Developments in NHSBT

3.1.1 <u>New Appointments</u>

New Appointments:

- Mr Mike Gumn - Head of Information Services. 12-month fixed-term basis.
- Dr Nicky Anderson - Associate Medical Director for Blood Donation. The Blood Donation structure has been split into two regions; North and South. Matt Jones will head up the South Region and Jane Pearson will remain as the North Region Lead.
- Dr Sarah Morley - Associate Medical Director for Manufacturing and Logistics.
- Ms Jazz Sehmi - Internal Communications Manager - January 2017.

3.2 Governance issues

3.2.1 Liver splitting activity - LAG(16)21

3.2.1.1 J O'Grady reported that there was a significant increase in the number of livers split in the first part of this year. Common reasons for not splitting the eleven livers reported in the paper presented were cited to be donor medical history or a lack of suitable paediatric patients for the left lateral segment.

3.2.1.2 **Operational policy – LAG(16)22**

3.2.1.2.1 P Friend presented a paper with the summary results listing 10 key points in relation to splitting. Owning to a lack of consensus from the seven transplant centres a firm proposal has not been established. It was recognised that the proposal needs to create a robust system to optimise the graft and right lobe, usually to the adult, as well as ensuring equity of access.

Discussion took place on some of the points raised:

- Liver splitting to start immediately on arrival at the splitting hospital as any delay will affect the ischemia time for the right lobe. It should not be

ACTION

made a hard rule for the right lobe not to remain at the site of splitting. It was recognised that Birmingham operates at two different sites but it is not the norm for the other transplant centres.

- If the liver is being split for two adults, then the left lobe is regarded as the index. A Gimson to incorporate this into the Liver Allocation Scheme. **A Gimson**
- Lead surgeon of the splitting team must have suitable experience. The number of surgeons to have suitable training per year has previously been discussed. It was suggested that maybe experience in living donor transplantation should be included.
- Utilisation should be monitored very closely as well as outcomes. This will require trust and collaboration i.e. communication at every point for optimum utilisation between the paediatric and adult transplant centres. It was recommended that a nominated group of surgeons with the correct skill competence at every centre should have agreed formal sign off to overcome the issue of trust.

Following discussion R Ploeg concluded that he had understood that until further notice the default for a liver to be split in the NORS Standards will be that the index centre is the base where the liver is sent to by the NORS team. The NORS team will only divert from this rule and send the liver to a non index centre if it is notified that both accepting liver transplant centres have agreed on this.

Members agreed with P Friend's summary outline to be a reasonable policy with some changes. P Friend to formalise the points into an Operational Policy. **P Friend**

D Manas will raise the outline of the Policy at NRG to enlist surgeons for agreement. **D Manas**

3.2.2 **Non-compliance with allocation**

3.2.2.1 No non compliance with the allocation of livers was reported.

3.2.2.1 **Variance with protocol**

3.2.2.1.1 J O'Grady informed members of a review undertaken for the last 5 years of acute liver failure patients aged over 60 years from the registry data. Of the 543 patients listed as Super Urgent (SU), 115 were aged 60 years and over. Activity variance ranged from King's College Hospital at 5% with other centres at between 20 - 25%. Outcome data for patients aged 60 years were shown to be poorer with failure being in the first 3 months but were above the 50% 5-year survival threshold. V Aluvihare reported that their patients are highly selective and have done fairly well. E Allen will undertake further analysis to investigate outcome broken down by paracetamol and non-paracetamol cases. **E Allen**

3.2.3 Detailed organ specific analysis of incidents for review – LAG(16)23

3.2.3.1 The following points were reported by J Forsythe in the absence of J Dark:

- 74 incidents where Liver was identified as a key word with one lost to transplant.
- 4 incidents related to poor access to histopathology to resolve donor abnormalities. This will be raised at ODT Care in December.

ACTION

- He raised one incident with details that had been circulated to LAG members and thanked colleagues for their input. An external review is underway and he therefore could not comment until after the review was complete.

- There were two liver specific issues. One being commonly related to liver splitting, where lobes should go, whether they are damaged and prolonged ischaemic time if long distances are involved. The second regarded a SU liver re-allocated when a lobe failed.

- A problem, seen at Birmingham, is the acceptance of multiple organs then being re-offered in the absence of a theatre being available. Delay, pathology and back up are the reported main issues in the transplantation process. Members were informed that a transplant centre has to be able to say "Yes" or "No" within the given timeframe rather than just say yes and then work out the operational feasibility. N Heaton outlined that their centre was transplanting 3 livers on one particular day and it was practical to get another centre prepared as a back up. Should this option be taken J O'Grady stated that the process needs to be time limited and communication between the surgeons is paramount. However, an alternative procedure is to ask for a delay in retrieval.

- Data shows that waiting time for both DCD and DBD transplantation is getting longer owing to a lack of resources. There will be a meeting in January on organ utilization to discuss the whole process of organ offering and will look at the issue of delays with DCD organs. It was stated that provisional offers are open ended and is not practical.

- A pathology research project led by G Pettigrew was successful. It would be useful to include a liver component to this to deal with donor pathology issues. Plans for digital pathology is being looked at to capture remote reporting to help with service evaluation.

J Forsythe emphasized to members that if donor characterization results are found to be incorrect, centres must report this to ODT. This follows a case of a sample labelled CMV negative but found to be CMV positive by some centres but not others and this was not reported leading, perhaps to an unsuccessful outcome.

3.2.3.1 **QUOD (Quality in Organ Donation) biopsy**

3.2.3.1.1 All transplant centres are included in the QUOD biopsy process which has been running since 2013.

R Ploeg presented a brief report on the progress and implementation of the QUOD project which is the national organ donor biobank sponsored by NHSBT collecting blood, urine, and a biopsy from kidney, liver, ureter and spleen for research and service evaluation purposes. CTAG has recently asked to add samples from lungs and hearts as well. This aspect is currently under discussion.

Surgeons are trained on how to take a donor liver biopsy on the back-table following the protocol advised by Birmingham (D Mirza/H Mergental). In total 1173 liver biopsies have been taken from August 2014 to 1 November 2016. A total of 3 incidents were reported to NHSBT of a bile leak/ biliary complication possibly related to the biopsy (0.2%). In one case the biopsy had been obtained not in segment 3 but elsewhere without any consequence. The recommendation at NRG is to take a photograph of the worksheet and organ/biopsy which can form part of the quality/safety and training process.

ACTION

N Heaton suggested that it may be useful to present a diagram to the implanting surgeon. This process will provide documented evidence for retrospective analysis should it be required. Advice was also sought from LAG on whether the segment 3 biopsy site was to be kept or changed for another site. P Muiesan and D Manas to discuss with R Ploeg the most adequate site of where the biopsy is taken. **P Muiesan/ D Manas/ R Ploeg**

It was highlighted that it is important to inform the patient about any intervention to the donor organ including the fact that a QUOD biopsy had been taken in the donor hospital. R Ploeg to draft the wording for a biopsy taken, to be given to patients for information, prior to transplantation. This is currently being done with the rest of the Advisory Groups. **R Ploeg**

To-date 80% of livers allocated have been subjected to a biopsy with a 0.2% complication rate. LAG members expressed their support for the QUOD project to allow further assessment of the quality of donor livers. Members expressed the need to use this resource for clinically relevant questions. It was concluded that all centres will continue to accept donor livers that have had a QUOD biopsy. R Ploeg to report annually on the progress of the biobank, any incidents and liver related research projects. **R Ploeg**

3.2.4 Summary of CUSUM monitoring of outcomes following liver transplantation – LAG(16)24

3.2.4.1 No signals were reported over the six month period since the last LAG meeting in May. The NHSBT monitoring process to detect any change in survival of patients post-transplant at 90 days was last reviewed in 2013 and is based on expected mortality rates determined from the base line period between 2008 and 2011.

The trigger line is reported to be out of date and needs to be revised to potentially make it specific for liver, rather than for all organs. The trigger line should be based on using the survival of a liver patient as the absolute number of days the patient has survived to retain more information on survival. The current monitoring process for outcome at 90 days survival treats death at 89 days differently to death at 91 days.

No CUSUM signal has been received for a long time, four in total to-date, but deviation is being seen. Proposed developments were approved and E Allen will review the process to include risk adjustment and to analyse survival data as a continuum and not as a binary variable. **E Allen**

3.2.5 Feedback from NRG

D Manas gave an update from the NORS capacity team review meeting.

- The % of on calls based on a figure of working 70% of the time was reported as 50% for abdominal and 25% for cardiothoracic (CT). A review of this activity at centres is also looked at once or twice a year.
- Delays are being reported at donor hospitals; two reasons have been due to a lack of theatre and CT delays.
- Organ damage rates – most centres seem to be the same; the lowest being at King's College and the highest at the Royal Free.
- Coroners' refusal still varies across the country. J Forsythe reported that NHSBT is engaging with new coroners and will be writing to the new Chief Coroner for a meeting.

ACTION

- D Manas informed members that a surgeon from LAG is required for the NORS review. Attendees are requested to notify their expressions of interest to R Ploeg or D Manas. **Centre Reps**

Post Meeting Note:

J Crookenden raised the point of a review on the Ministry of Justice for Coroners. The Terms of Reference require them to make themselves available. A review in the BMJ on this issue was sent to J Crookenden earlier in the year http://bmjopen.bmj.com/content/6/7/e010231 J Forsythe will raise the report with the coroners and ask for progress. **J Forsythe**

3.2.6 NORS

3.2.6.1 Update from NORS

3.2.6.1.1 Please refer to agenda item 3.2.5 above.

4 UPDATE ON NHS ENGLAND

4.1 **Update on NHS England**

4.1.1 **Liver transplant commissioning**

4.1.1.1 S Watson reported that the Service Specification for transplantation has been agreed and will be published. It has been revised and will be included in the contracts for 2017/19.

The initiative to repatriate immunosuppression prescribing to transplant centres will require finance and a budget will need to be assessed initially for Heart or Liver. The timeframe for this to take place is not yet known. The movement of resources has not changed in the last 12 months. S Watson will progress this. **S Watson**

NHS England's plan is to review transplant services. S Watson reported that she had not seen anything about a reduction in funding and has undertaken some activity modelling across the services though it is difficult to project to 2020. D Manas commented that no feedback has been given to the National Retrieval Group (NRG) community regarding current overall transplant activity and how it will look like in 2020 but currently barriers to organ utilisation is throwing up issues.

4.1.2 **Update on Peer Review**

4.1.2.1 Progress is being made with the Peer Review finishing on 14 December. The projected initial report is for the end of March and there will be a feedback session at the British Transplantation Society (BTS).

4.1.3 Organ specific report for NHS England – LAG(16)25

4.1.3.1 E Allen presented the latest version of the annual report to members for information. Feedback from members were:

- Table 5 - it would be beneficial to show data for the rows reading "Not reported" for each of the variables. **E Allen**
- Table 23 – Form return rates. Members were reminded to return any outstanding transplant forms for their centres. **Centre Reps**

ACTION

E Allen requested any further feedback on the report to be emailed to her so that this could be incorporated in discussions with NHS England. **Centre Reps**

S Watson was complementary about the report and thanked NHSBT for its production.

5 ICT UPDATE REPORT – LAG(16)46

5.1 Members were presented with an ICT report outlining the update on the Donor Registration Transformation, the new ICT systems supporting the ODT Hub and an update on the planned new NHSBT Desktop.

6 National Offering Scheme

6.1 **Update on timeframe and logistics**

6.1.1 A summary of the main points of A Sheldon's presentation is given below:

- The Cardiothoracic Allocation Scheme has been successfully delivered on the new platform in October, on schedule.
- Work is currently being undertaken on the Super Urgent Liver transplant list. Feedback is being sought for this.
- Resource is in place for development of the new Liver Offering scheme. The detail is being worked on next month. The launch is expected to be late Summer 2017.

E Allen outlined the following points:

- Internal discussion is taking place to harmonise the adult offering process with the paediatric offering process. Issues raised were:
  - the paediatric offering process may be amended to allow paediatric patients weighing more than 40kg to be eligible for dual paediatric and adult listing. A small number of adult donors has gone to paediatric recipients weighing more than 30 kg.
  - small donors under 14 years currently tend to fall under multi-visceral transplants. Consider how to prioritise children on the waiting list for this. There is no validated listing scoring system. P Friend to pick up this issue in the SOP. A Taylor stated that the current system is not working for paediatrics. The Patient Group view is that anything that can be done to offer timely transplants for children while they are still growing would be helpful. **P Friend**
  - offering of Variant Syndrome Patients. Current agreement is to offer liver donors to these patients equal to the proportion of variant-syndrome registrations each year. J Forsythe mentioned that implementing such an offering system specifically for variant-syndrome patients would be complex and asked LAG members to allow NHSBT to explore alternative options. E Allen will take this forward with the LAG Core Group and J Forsythe is happy to be involved in the discussion process. **E Allen**
  - registration and offering to hepatocyte patients. E Allen asked whether the offering of livers to this type of patient should be deemed as transplant cases or research. E Allen will take this forward with W Littlejohn and the LAG Core Group. **E Allen**

ACTION

J Crookenden requested a firm end date for the resolution of the issues which needs to be done as quickly and as safely as possible. From the Patient Group perspective the least number of changes the better. J Forsythe stated it was not possible to provide an end date without knowing all the issues in detail. E Allen reported that two meetings have been held with the Hub Programme Team translating instructions into procedures and there has been progress.

It was acknowledged that pragmatic solutions are required to avoid delaying the national liver offering system anymore.

6.2 **Risk assessment of the Scheme**

6.2.1 E Allen informed members that at this stage there is not much to report on the work to quantify risk associated with the new offering scheme e.g. travelling costs incurred to transport organs on a national basis. An update will be given at the next meeting in May. J O'Grady stated that it would be beneficial to disseminate this information effectively at one central national meeting in Spring. **E Allen**

6.3 **Current draft Liver Offering specification document – LAG(16)26**

6.3.1 A paper outlining the liver offering scheme incorporating member feedback was presented and agreed by LAG.

6.4 **Update on changes to elective liver registration form – LAG(16)27**

6.4.1 Changes are required to the Elective Liver Recipient Registration form to enable collection of new information for the Liver National Offering Scheme. Following discussion at LAG Core Group a number of changes were recommended, some of which are listed below:

- Capture patient's preferences to include whether they will accept a DCD donor liver transplant;
- Removal of liver disease codes 443 and 445 and other primary liver Cancers;
- Remove box for registering patients as suspended.

A more detailed list is presented in the paper.

6.5 **Proposal for SNODs to sign release form from donor to recipient Hospital**

6.5.1 It was reported that the legal viewpoint of a specialist nurse, signing the release form on behalf of a surgeon, is still held responsible. A pragmatic solution could be for the operation sheet for retrieval surgery to be completed by the surgeon electronically after surgery or for the theatre practitioner to dictate the details of the release and sign off.

7 UPDATE ON CLINICAL SERVICE EVALUATIONS

7.1 Update on HCC downstaging – LAG(16)28

7.1.1 The question was raised from Birmingham as to whether a patient with a tumour that was resected and remained free of recurrence one year later was eligible for the Downstaging SAE. The unanimous opinion was that this was not appropriate.

ACTION

7.2 Update on acute alcoholic hepatitis – LAG(16)29

7.2.1 It was reported that the current protocol in the service evaluation has failed to transplant any patient with SAAH (severe acute alcoholic hepatitis). The proposal is therefore to expand the inclusion criteria and A Gimson agreed to draft this modification. **A Gimson**

J O'Grady commented that the decision to transplant should not be a centre decision, or an appeals process but more a National Central Monitoring Group decision. This would provide consistency in practice. Any changes should be interlinked with the Alcohol Policy. A Holt stated that it was encouraging to have a central framework to deal with difficult cases.

J Powell recommended that information should be collected for those with severe hepatitis within their centres. This will be raised at the next LAG meeting in May. K Huang to list this on the agenda. The Clinical Service Evaluation will remain open in the meantime **K Huang**

7.3 Update on sickle cell hepatopathy – LAG(16)30

7.3.1 There have been seven patients registered for sickle cell hepatopathy since March 2011. This does not provide enough evidence on whether this type of transplantation should be approved because of heterogeneity of cases. Therefore the proposal is to continue on a named appeals basis for patients strictly meeting the inclusion criteria for the clinical service evaluation and for E Allen to arrange closing the service evaluation. **E Allen**

8 FTWU REPORTS

8.1 Update on split livers and draft report

8.1.1 Refer to agenda item 3.2.1.1.

7.2 Update on alcohol guidelines/policy

7.2.1 The question was posed to centres as to whether the existing guidelines should be made guidelines, policy or to develop a protocol combining both formats. No feedback was received from six centres. One centre wanted a combination of both. Based on this J O'Grady will leave the existing guidelines as guidelines rather than policy. (A view shared by the previous Associated Medical Director, J Neuberger). A Holt also supported this view.

8.3 Combined liver/kidney transplantation – LAG(16)31a & 31b

8.3.1 M Hudson reported that 1-2% of patients undergoing a combined liver/kidney transplant remained constant for the last 12 yrs. Recommendations on the indications for listing patients for combined liver and kidney were approved.

Medium waiting time of 1000 days is a concern but the number being performed has increased since the change in the kidney allocation was changed. The FTWU report will be sent to KAG for approval. **M Hudson**

8.4 Early graft dysfunction – LAG(16)32

8.4.1 A Gimson reported that a report will be available in December and will be raised at the LAG meeting in May 2017. **A Gimson**

ACTION

9 STATISTICS AND CLINICAL STUDIES REPORT

9.1 **Summary from Statistics and Clinical Studies - LAG(16)33**

E Allen presented a paper updating work undertaken within Statistics and Clinical Studies. A summary of the points raised were:

- The Clinical Transplant Fellow at King's College recently resigned. With 6 months remaining on the Contract the decision has been made not to re-advertise and to wait until the Contract with NHS England is renewed in January before re-advertising for an Abdominal Transplantation Clinical Fellow.
- A study with clinicians at Addenbrooke's Hospital to determine whether a patient should accept a DCD liver now or wait with the associated risk of dying is being written up for publication.
- No agreement has been made to supply data to other countries. This issue will be discussed further at LAG Core Group. A request will be made to J Forsythe to develop a uniform policy to open up access to data. **J O'Grady**

10 UPDATE ON ADULT TO ADULT LIVE DONOR TRANSPLANT – LAG(16)34

10.1 A meeting held on 7 October 2016 agreed there was a need for a national Living Donor Liver Transplant (LDLT) program to be developed in every designated liver transplant centre. The LDLT transplant process will need to be safe and standardised and shared across all centres currently already doing it.

To ensure safety, a national mentoring team from Kings, Birmingham and Leeds will be involved in every living donor transplant in every part of the country to determine the national strategy. The national strategy will be led by L Burnapp.

Agreement has been given for a working party for patients to be offered the procedure anywhere in the country. This will require engagement with NHS England. N Heaton suggested that with the intensity of work increasing out of hours and the difficulty of getting good calibre graduates, it would be advantageous to offer more payments for this type of transplant.

11 NATIONAL APPEALS PANEL

11.1 **Review of the Process – LAG(16)35**

It was reported that a number of communications raised concern with the Super Urgent liver listing. The process of allowing an appeal will continue for cases that don't quite meet listing criteria as well as for cases not covered by the criteria. The details of a Super-Urgent Appeal will be circulated by the Duty Office to accelerate response times. A decision will be made once 4 similar responses are received or on a majority position at 12 hours. Executive decision role by the chairman of the National Appeals panel to cease. **E Allen/ J O'Grady/ Duty Office**

11.2 **Outcome of Appeals – LAG(16)36**

A paper listing the outcomes of appeals was noted.

ACTION

12 BOWEL ADVISORY GROUP

12.1 **Report from the Bowel Advisory Group meeting: 12 October 2016**

12.1.1 There were no significant issues to report.

13 ANY OTHER BUSINESS

13.1 **DCD liver donor screening proposal – LAG(16)37**

13.1.1 It was reported that calls at all hours are being received, where DCD kidney screening is undertaken and the patient is deemed unsuitable, liver centres are contacted for liver screening. N Heaton and Wendy Littlejohn have volunteered to work with A Broderick with statistical support from E Allen to look at potential donors that can be excluded at an early phase of the assessment. **N Heaton/ W Littlejohn/ A Broderick/ E Allen**

13.2 N Heaton highlighted that adolescents aged 18-25 years were a vulnerable group as the brain in this age group has not fully matured. Data shows there is a poor outcome for this group with liver impairment. This view was supported by A Taylor from the Child Liver Disease Association. J O'Grady recommended that the FTWU on adolescents and young adults be re-established to look at this area. He will advise membership. **J O'Grady**

13.3 D Thorburn asked whether with the availability of DAAs livers from HCV positive donors could be used in HCV negative recipients. LAG Core Group will review this and develop a recommendation. **J O'Grady**

13.4 P Muiesan from Birmingham agreed to look at the usage of the perfusion machines and the infection rate. **D Manas/ P Muiesan**

14 DATE OF NEXT MEETING:

Wednesday 10 May 2017, London
Wednesday 22 November 2017, London

15 FOR INFORMATION ONLY

The following papers were attached for information to members:

15.1 **Transplant activity report: October 2016 - LAG(16)38**

15.2 **Group 2 Transplants – LAG(16)39**

15.3 **Blood group: Waiting times and deaths on the transplant list - LAG(16)40**

15.4 **Donor allocation zone realignment – annual review - LAG(16)41**

15.5 **Dashboard on liver transplantation - Activity and organ utilisation - LAG(16)42**

15.6 **Minutes of the Bowel Advisory Group meeting: 2 March 2016 - LAG(16)43**

ACTION

15.7 **Minutes from the National Retrieval Group: 6 July 2016 - LAG(16)44**

15.8 **Update on Patient Consent Scheme – LAG(16)45**

Organ Donation & Transplantation Directorate **November 2016**

Administrative Lead: Kamann Huang