

## NHS BLOOD AND TRANSPLANT OCULAR TISSUE ADVISORY GROUP

### SUMMARY FROM STATISTICS AND CLINICAL RESEARCH

#### INTRODUCTION

- 1 This report summarises current and future work being undertaken by Statistics and Clinical Research, as well as providing details of conference presentations given and manuscripts submitted.

#### UPDATE FROM STATISTICS AND CLINICAL RESEARCH

- 2 The Annual Organ Donation and Transplantation Activity report for 2022/23 was published in July 2023. The corneal donation and transplantation chapter shows the decline in activity resulting from the COVID-19 pandemic. The report is available online at [www.odt.nhs.uk/statistics-and-reports/annual-activity-report/](http://www.odt.nhs.uk/statistics-and-reports/annual-activity-report/).
- 3 ODT Hub Information Services are up to date on processing the transplant record form but still have a backlog of follow-up forms to input. The backlog has meant that the surgeon datasets haven't been produced this year. Despite this, the Annual Centre and Surgeon reports will be circulated over the next few weeks. The refraction and form return rates sections of the report were updated, as well as the transplant outcome section, which includes risk-adjusted graft survival rates accounting for varying patient mix. Since the introduction of the reports and the NHSBT divergent outcomes policy, one surgeon has received additional training and support.
- 4 Ocular staffing support in the team currently include Mark Jones and Konstantina Soumilas. Please note our current arrangements for staff responsibilities in support of organs and tissues below.

Area	Lead
Assistant Director for Statistics and Clinical Research	Rachel Johnson
Head of Organ and Tissue Donation and Transplantation Studies	Lisa Mumford
Ocular Tissue	Cathy Hopkinson
Organ donation	Susanna Madden
Organ retrieval	Lisa Mumford
Organ utilisation	Susanna Madden
Enquiries	statistical.enquiries@nhsbt.nhs.uk
Kidney transplantation	Matthew Robb
Pancreas transplantation	Claire Counter
Liver transplantation	Rhiannon Taylor
Multi-visceral and composite tissue	Chloe Brown
Cardiothoracic transplantation	Rachel Hogg
Blood transfusion / stem cells	Elisa Allen

#### CONFERENCE PRESENTATIONS

- 5 Corneal donation and transplantation trends in the UK were presented by Cathy Hopkinson at The Bowman Club in March and the Eye Summit in July.

## PUBLICATIONS

- 6 Papers in preparation and those submitted or accepted for publication are listed below. Publications over the last 10 years are listed in the **Appendix**.

### ***Papers in preparation***

Investigating the influence of surgeon learning on outcome of DSAEK and DMEK grafts

L Downward, C Hopkinson, F Larkin, S Shanmugaranjan

Demographics, clinical characteristics and surgical outcomes of corneal transplantation to treat Aniridia Associated Keratopathy in the UK

N Onwuka, MN Sarfraz, G Figueiredo, F Figueiredo

Standard risk-adjusted graft rejection and survival models at two and five years

C Hopkinson, E Curnow, S Kaye

### ***Papers submitted/accepted for publication***

*None*

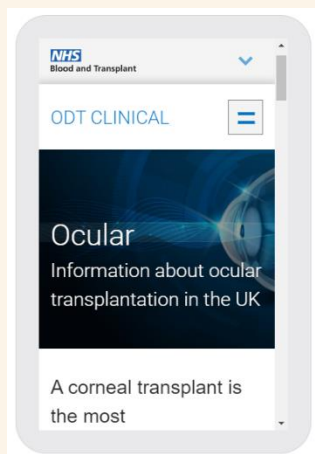
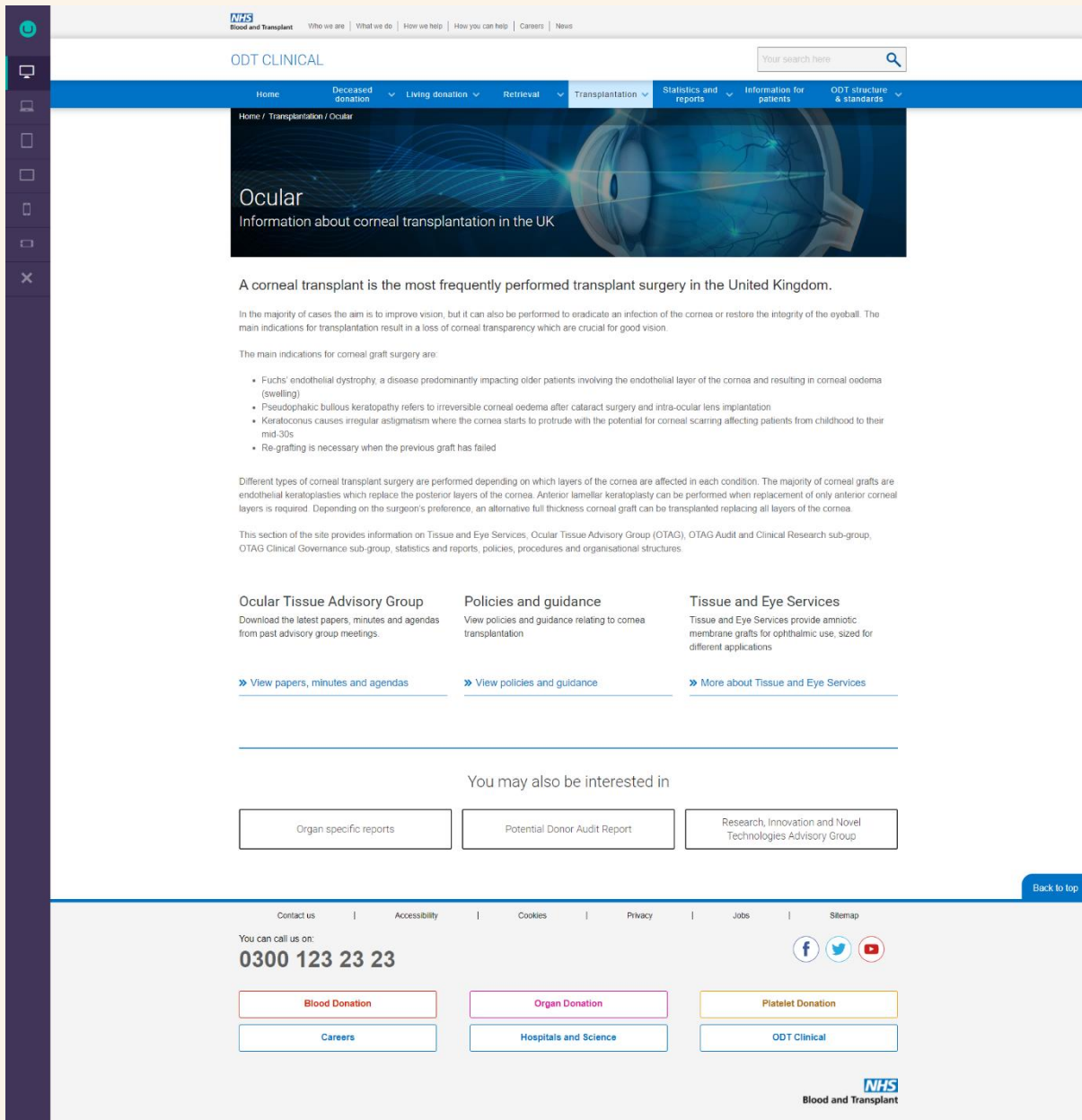
### ***Papers published since last report***

*None*

## CURRENT AND FUTURE WORK

- 7 Statistics and Clinical Research are currently working on several ocular projects:
- i. Updating the ocular section of the OTDT clinical website is in progress (<https://www.odt.nhs.uk/>), a new homepage has been implemented (**see Appendix**) with several tabs.
  - ii. Production of standardised OTAG papers reported to this group showing current activity and trends have been created, although additional papers are still recommended. Any comments are welcomed.
  - iii. Exploring potential approaches to analyses for the NHSBT divergent outcomes policy, to account for surgeons who are currently excluded due to low volume transplant activity.
  - iv. Additional unused tissue codes are under IT development and the updated Transplant and Tissue Outcome form has been circulated.
- 8 Future planned work includes:
- i. Characterising the rate of graft dislocation and primary graft failure following endothelial keratoplasty and the influence of donor and recipient factors on DSAEK and DMEK 2-year graft survival.

APPENDIX



**AUDIT AND RESEARCH PUBLICATION LIST****Publications over the last 10 years**

OTAG11

Stylianides A, Jones MNA, Stewart RMK, Murphy CC, Goodson NJ, Kaye SB. Mortality and Graft Survival of Patients Receiving Penetrating Keratoplasty for Rheumatoid Arthritis associated Corneal Ulceration. *Ophthalmology* 2013; 120(4): 682-686

OTAG14

Chua P, Azuara-Blanco A, Hulme W, Jones MNA, Kaye SB. The effect of socioeconomic deprivation on corneal graft survival in the UK. *Ophthalmology* 2013; 120(12): 2436-2441

OTAG12

Armitage WJ, Jones MNA, Zambrano I, Carley F, Tole DM. Influence of donor and recipient factors on five-year graft survival of corneas stored by organ culture used in penetrating keratoplasty. *Investigative Ophthalmology and Visual Science* 2014; 55(2): 784-791.

OTAG15

Kasbekar S, Jones MNA, Ahmad S, Kaye SB. Corneal Transplant Surgery for Keratoconus and the Effect of Surgeon Experience on Deep Anterior Lamellar Keratoplasty Outcomes. *American Journal of Ophthalmology* 2014; 158(6): 1239-1246

OTAG16

Greenrod E, Jones MNA, Kaye DB, Larkin DFP. Center and Surgeon Effect on Outcomes of Endothelial Keratoplasty versus Penetrating Keratoplasty in the United Kingdom. *American Journal of Ophthalmology* 2014; 158(5): 957-966

OTAG17

GS Figueiredo, MNA Jones, Y Krishna, FC Figueiredo, DFP Larkin, SB Kaye. Transplant rejection following endothelial keratoplasty and penetrating keratoplasty in the United Kingdom: incidence and survival. *American Journal of Ophthalmology* 2015; 160(3): 416-421

OTAG18

Chen JY, Jones MNA, Srinivasan S, Neal TJ, Armitage WJ, Kaye SB. Endophthalmitis after penetrating keratoplasty. *Ophthalmology* 2015; 122(1) 25-30

OTAG19

Wakefield MJ, Armitage WJ, Jones MNA, Kaye SB, Larkin DFP, Tole D, Prydal J. The impact of donor age and endothelial cell density on graft survival following penetrating keratoplasty. *British Journal of Ophthalmology* 2015 [Epub ahead of print].

OTAG21

Steger B, Curnow E, Romano V, Cheeseman R, Kaye A, Jones MNA, Kaye SB. Bilateral corneal transplants increase graft survival in the first eye. *American Journal of Ophthalmology* 2016; 170: 50-57

OTAG20

Hopkinson CL, Romano V, Kaye R, Steger B, Stewart R, Tsagakataki M, Jones MNA, Larkin DFP, Kaye SB. The influence of donor and recipient gender incompatibility on corneal graft rejection and failure. *American Journal of Transplantation* 2017; 17: 210-217

## OTAG23

Sing-Pey Chow, Cathy L Hopkinson, Derek M Tole, Mark N Jones, Stuart D Cook, W John Armitage. Stability of Visual Outcome Between 2 and 5 Years Following Corneal Transplantation in the United Kingdom. *British Journal of Ophthalmology* 2018 Jan; 102(1):37-41

## OTAG4

Hossain P, Tourkmani AK, Kazakos D, Jones M, Anderson D on behalf of the NHS Blood and Transplant Ocular Tissue Advisory Group and Contributing Ophthalmologists. Emergency corneal grafting in the UK: a 6-year analysis of the UK Transplant Registry. *British Journal of Ophthalmology* 2018;102:26-30

## OTAG22

SJ Robbie, MNA Jones, DFP Larkin

The influence of socio-economic deprivation on visual acuity in patients undergoing corneal transplantation. *Cornea* 2018; 37(1):28-32.

Armitage WJ, Winton HL, Jones MNA, Crewe JM, Rogers CA, Tole DM, Dick AD. Corneal transplant follow-up study II (CTFS II): a prospective clinical trial to determine the influence of HLA class II matching on corneal transplant rejection: baseline donor and recipient characteristics. *The British Journal of Ophthalmology* 2018 Mar 22. pii: bjophthalmol-2017-311342. doi: 10.1136/bjophthalmol-2017-311342.

## OTAG25

Jonathan Aboshiha, Mark N.A Jones, Cathy L. Hopkinson, Daniel F.P Larkin. Differential survival of penetrating and lamellar transplants in management of failed corneal grafts. *JAMA Ophthalmology* 2018;136(8):859-865. doi:10.1001/jamaophthalmol.2018.1515

## OTAG26

Daniel Sibley, Cathy L Hopkinson, Stephen J Tuft, Stephen B Kaye, Daniel F P Larkin. Differential effect of primary disease and corneal vascularisation on corneal transplant rejection and survival. *British Journal of Ophthalmology*  
<http://dx.doi.org/10.1136/bjophthalmol-2019-314200>

## OTAG27

Michael Rotenberg, Lewis Downward, Elinor Curnow, Daniel F. Larkin, Stephen J. Tuft Graft Survival following penetrating and endothelial keratoplasty in iridocorneal endothelial syndrome. *Cornea*. 39(1):18–22, January 2020

## OTAG30

W John Armitage, Helen L Winton, Mark N A Jones, Lewis Downward, Julie M Crewe, Chris A Rogers, Derek M Tole, Andrew D Dick  
Corneal Transplant Follow-up Study II: a randomised trial to determine whether HLA class II matching reduces the risk of allograft rejection in penetrating keratoplasty  
*British Journal of Ophthalmology* 2020; 0: 1–6. December 2020

## OTAG29

Denise Wajnsztajn, Cathy L Hopkinson, Daniel F P Larkin  
Keratoplasty for keratoconus in paediatric patients: demographics, clinical features and post-transplant outcomes. *American Journal of Ophthalmology*; 226: 68-75 February 2021

## OTAG study 32

Cathy Hopkinson, Elinor Curnow, Daniel F.P Larkin, Jeremy Prydal, Stephen Tuft  
Graphical comparison of surgeon outcomes for the audit of a national corneal transplant registry. *Eye* 2022 published online