

**NHS BLOOD AND TRANSPLANT
RETRIEVAL ADVISORY GROUP
REVIEW OF BLUE LIGHT USAGE**

Introduction

- 1 This report presents usage of blue lights when transporting organs and NORS teams. Discussions have been held between NHS Blood and Transplant (NHSBT), Department of Health and Social Care (DHSC) and the Department for Transport (DfT) to clarify the current legal position and to improve the governance for the activation of blue lights while carrying organs for the purpose of transplantation.
- 2 The usage of blue lights was analysed for the transport of organs and teams for both living and deceased donors.

Cohort

- 3 The cohort considered was journeys for organs and NORS teams where blue lights were used between 1 August 2021 and 30 January 2022, data as at 14 March 2022. Data on the usage of blue lights were provided by the transport provider IMT and linked to the UK Transplant Registry using ODT Donor ID.

Results

- 4 In the period, there were 3,326 journeys recorded by IMT, with 272 (8%) involving blue light use. **Table 1** shows the total number of times blue lights were used with a breakdown for each organ, 50% of blue light journeys took place when transporting a liver. The centre who requested blue lights and reason for using blue lights are presented in **Table 2** and **Table 3** with the deterioration of an organ being the most common reason. On a donor basis, blue lights were used for 31% of deceased donors as shown in **Table 4**.
- 5 The median duration of blue light use was 101 minutes (1.6 hours) as shown by the red line in **Figure 1**, the bars represent 10-minute intervals. The day of week and time of day at which the use of blue lights commenced is presented as a heat map in **Figure 2** and **Figure 3**. Heat maps are used here to indicate the level of activity, darker shades are used to indicate higher activity. **Figure 2** and **Figure 3** show that most blue light journeys took place during daytime between 08:00 and 18:00 with Thursday and Friday being the most common day.

Organ type	N	%
Liver	137	50
NORS Team	51	19
Heart	36	13
Kidney	35	13
Lung	8	3
Pancreas	5	2
Total	272	100

**Table 2 Reason for blue light use,
1 August 2021 to 30 January 2022**

Reason	N
Deterioration of Organ	254
Deterioration of Patient	11
Unknown	7
Total	272

**Table 3 Centre authorising blue light use,
1 August 2021 to 30 January 2022**

Centre	N
Kings College Hospital	60
Royal Free	27
Queen Elizabeth Hospital Birmingham	25
St James University Hospital Leeds	24
Addenbrookes Cambridge	20
Royal Papworth Hospital	16
Freeman Hospital	15
Guys Hospital	15
Birmingham Childrens Hospital	9
Great Ormond Street Hospital	7
Harefield Hospital	6
Churchill Hospital Oxford	5
Golden Jubilee National Hospital	5
Leeds General Infirmary	5
University Hospital Southampton	3
Aintree University Hospital	2
Hammersmith Hospital	2
Manchester Royal Infirmary	2
Queen Alexandra	2
Royal Liverpool Hospital	2
St George's Hospital	2
Wythenshawe Hospital Manchester	2
Basildon Hospital	1
Edinburgh Royal Infirmary	1
Frimley Park Hospital	1
Leicester General Hospital	1
Nottingham City	1
Queen's Hospital Romford	1
Royal London	1
Royal Stoke University	1
Royal Surrey	1
University Hospital Lewisham	1
William Harvey Hospital	1
Worcestershire Royal Hospital	1
Total*	268

*4 cases where transport was recorded as being booked on behalf of an airport were excluded

Table 4 Proportion of donors with blue light use, 1 August 2021 to 30 January 2022

Donor type	Total number of donors	Number of donors involving blue lights	% involving blue lights of total donors
Deceased	687	216	31
Living	402	2	<1
Total	1089	218	20

Figure 1 Duration of journeys with any blue light usage, 1 August 2021 to 30 January 2022

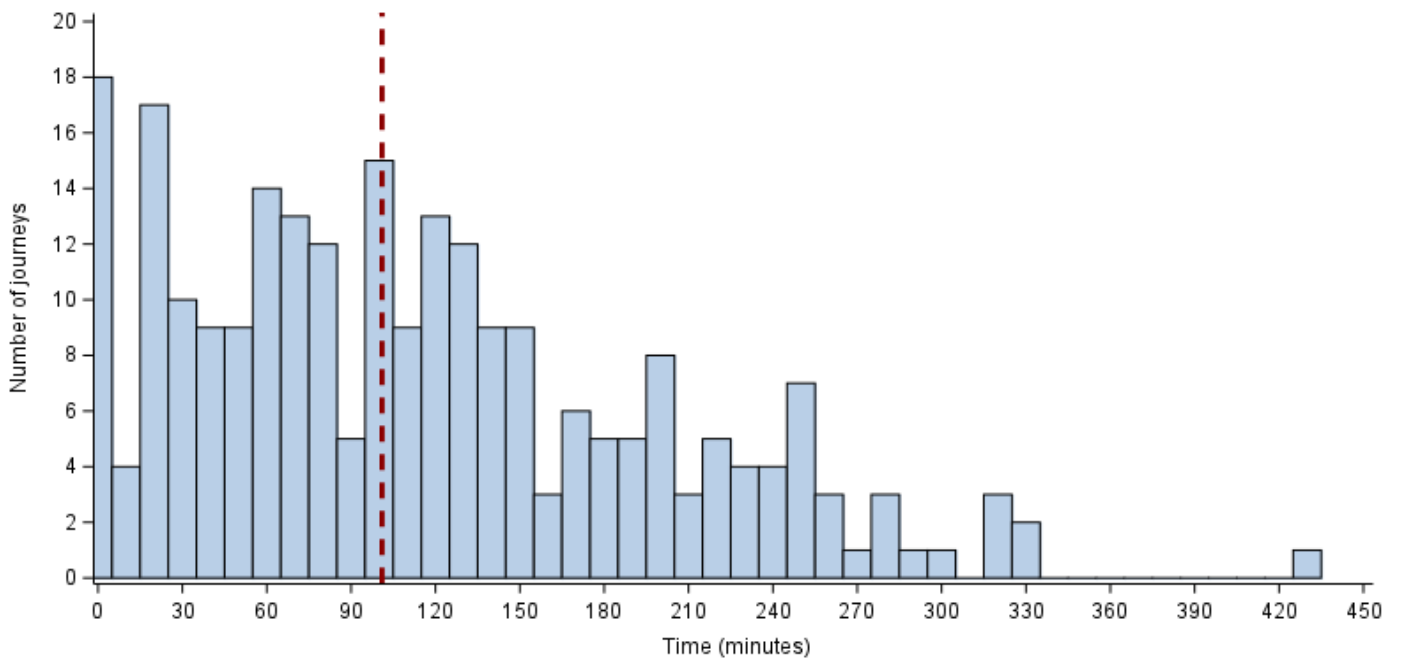


Figure 2 Heat map of start day and time of blue light usage, 1 August 2021 to 30 January 2022

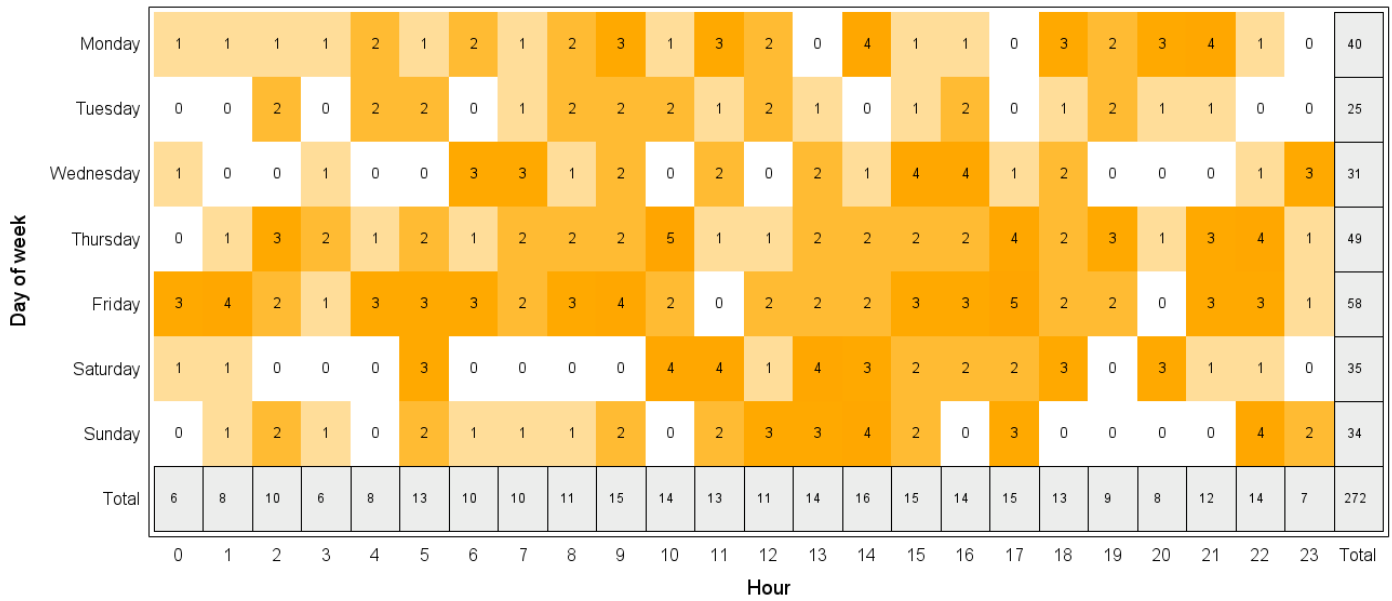


Figure 3 Heat map of start time of blue light usage, 1 August 2021 to 30 January 2022



**Rebecca Hendry
Statistics and Clinical Research**

March 2022