

NHS BLOOD AND TRANSPLANT

LIVER ADVISORY GROUP

NATIONAL OFFERING SCHEME - PARALLEL RUN ANALYSIS

INTRODUCTION

- 1 A national offering scheme for DBD and DCD livers to adult elective patients has been agreed by LAG subject to review of a parallel evaluation of the proposed arrangements vs. current arrangements.
- 2 Consideration has been given to how a parallel evaluation could work given the risks of making hypothetical offers real time. It was felt that donor livers transplanted into elective adult patients could be compared against the active waiting list on a weekly basis to identify the highest ranked patient based on the transplant benefit allocation proposal. This would be a good approximation to real time, with a waiting list that is at most 7 days out of date.

EVALUATION OF PARALLEL RUNNING

- 3 In order for LAG members to consider how such parallel running might be used to assess the performance of the agreed scheme, this paper reports on the parallel running over one week of the current allocation scheme against the transplant benefit scheme as described above. This example includes deceased donors from 1 - 7 October 2015 and 'allocates them' to elective adult patients on the active liver transplant list as at 1 October 2015 based on the new principles (transplant benefit).
- 4 Between 1 and 7 October 2015, there were fourteen deceased liver donors which resulted in adult recipient elective liver only transplantation. On 1 October 2015 there were 534 adult elective patients on the active liver only transplant list.

- 5 **Table 1** shows donor and recipient characteristics for the actual donors and elective adult recipients in the first week of October alongside the characteristics of the patient with the greatest transplant benefit from that donor from the waiting list on 1 October, ie the proposed recipient under the new scheme.

ACTION

- 6 The results from one week of parallel evaluation are shown so that members can agree what additional information is required and how results should be presented for a longer evaluation period.

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Table 1 Donor and recipient characteristics for liver deceased donor transplants, 1 - 7 October 2015, showing actual recipients and proposed recipients under the transplant benefit scheme

	Donor		Recipient		
			Actual recipient		New scheme recipient
1	Age	21	Age	64	63
	Zone	D	Centre	D	C
	Type	DCD	UKELD	58	64
	BMI	31.1	Diagnosis	Non-alcoholic fatty liver disease	Alcoholic liver disease
			Travel distance (minutes)	39	86
			Transplant benefit (days)	465.8	1527.7
			Waiting time (days)	63	129
2	Age	61	Age	64	60
	Zone	E	Centre	E	A
	Type	DCD	UKELD	49	58
	BMI	24.5	Diagnosis	Cryptogenic cirrhosis	Alcoholic liver disease
			Travel distance (minutes)	120	344
			Transplant benefit (days)	388.9	1522.2
			Waiting time (days)	170	59
3	Age	35	Age	68	73
	Zone	C	Centre	C	A
	Type	DBD	UKELD	54	59
	BMI	22	Diagnosis	Primary sclerosing cholangitis	Primary sclerosing cholangitis
			Travel distance (minutes)	77	299
			Transplant benefit (days)	1141.1	1465.9
			Waiting time (days)	72	42
4	Age	66	Age	66	64
	Zone	G	Centre	G	E
	Type	DBD	UKELD	52	58
	BMI	22.4	Diagnosis	Non-alcoholic fatty liver disease	Other metabolic liver disease
			Travel distance (minutes)	90	416
			Transplant benefit (days)	1285.8	1470.5
			Waiting time (days)	294	233
5	Age	19	Age	67	71
	Zone	B	Centre	D	C
	Type	DBD	UKELD	58	54
	BMI	22	Diagnosis	Primary biliary cirrhosis	Primary sclerosing cholangitis
			Travel distance (minutes)	130	111
			Transplant benefit (days)	1173.3	1358.2
			Waiting time (days)	103	240

Donor			Actual recipient		New scheme recipient	
6	Age	54	Age	62		62
	Zone	F	Centre	B		B
	Type	DCD	UKELD	52		52
	BMI	29.2	Diagnosis	Hepatitis C cirrhosis		Hepatocellular carcinoma – cirrhotic
			Travel distance (minutes)	103		103
			Transplant benefit (days)	592.2		592.2
			Waiting time (days)	60		60
7	Age	60	Age	63		57
	Zone	E	Centre	E		G
	Type	DCD	UKELD	50		66
	BMI	27.3	Diagnosis	Hepatocellular carcinoma - cirrhotic		Polycystic liver disease
			Travel distance (minutes)	21		410
			Transplant benefit (days)	-401.7		1381.1
			Waiting time (days)	124		348
8	Age	31	Age	18		66
	Zone	E	Centre	E		E
	Type	DBD	UKELD	67		58
	BMI	24.2	Diagnosis	Other		Alcoholic liver disease
			Travel distance (minutes)	21		21
			Transplant benefit (days)			1401.5
			Waiting time (days)	3		89
9	Age	45	Age	22		68
	Zone	B	Centre	G		E
	Type	DBD	UKELD	55		59
	BMI	30.1	Diagnosis	Alpha-1-antitrypsin deficiency		Alcoholic liver disease
			Travel distance (minutes)	285		151
			Transplant benefit (days)			1395.5
			Waiting time (days)	255		115
10	Age	32	Age	61		70
	Zone	A	Centre	C		F
	Type	DBD	UKELD	64		56
	BMI	29.1	Diagnosis	Non-alcoholic fatty liver disease		Non-alcoholic fatty liver disease
			Travel distance (minutes)	212		176
			Transplant benefit (days)	1006.7		1414.5
			Waiting time (days)	111		127
11	Age	50	Age	57		67
	Zone	B	Centre	B		A
	Type	DCD	UKELD	46		58
	BMI	25.9	Diagnosis	Hepatitis C cirrhosis		Recurrent disease
			Travel distance (minutes)	82		166
			Transplant benefit (days)	-224.5		1429.0
			Waiting time (days)	176		48

Donor		Actual recipient		New scheme recipient	
12	Age 55	Age	68		60
	Zone F	Centre	F		C
	Type DBD	UKELD	57		62
	BMI 24	Diagnosis	Non-alcoholic fatty liver disease		Alcoholic liver disease
		Travel distance (minutes)	107		193
		Transplant benefit (days)	1374.7		1424.3
		Waiting time (days)	516		57
13	Age 42	Age	70		68
	Zone E	Centre	F		G
	Type DBD	UKELD	50		51
	BMI 31	Diagnosis	Hepatocellular carcinoma - cirrhotic		Non-alcoholic fatty liver disease
		Travel distance (minutes)	190		459
		Transplant benefit (days)	117.1		1378.0
		Waiting time (days)	101		119
14	Age 67	Age	47		65
	Zone E	Centre	E		E
	Type DBD	UKELD	57		51
	BMI 39.8	Diagnosis	Alcoholic liver disease		Non-alcoholic fatty liver disease
		Travel distance (minutes)	117		117
		Transplant benefit (days)	274.8		1173.2
		Waiting time (days)	398		85