

# National Organ Utilisation Conference 2022 New Perspectives in Organ Utilisation

Friday 27<sup>th</sup> May

Welcome to the conference. We will be starting shortly.



Visit the **conference website** to view the
agenda and pre-recorded
presentations



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#### **Welcome & Introduction**

Professor Derek M Manas

# Goals for the day



- Hear fresh perspectives on organ utilisation
- Reflect on national OU issues
- Inform broader transplant audience about utilisation projects
- Consider the impact of culture on utilisation
- An update on the work of the Organ Utilisation Group

# Housekeeping





If you have any comments during the presentations, please use the Teams chat during the Q&A sessions



We will be seeking your input via "Menti" during the session — have your phone/tablet handy!



Attendees will be muted during the sessions



This session is being recorded (if you have any concerns, please let a member of the team know)



# "About you" Menti

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# **Keynote Speakers**

Ian Currie
Professor Greg Snell



### **Abdominal NRP**

Ian Currie



#### What does it mean?

- → NO' RIGHT PAL
- → NOT REALLY PRACTICAL



#### What does it mean?

- → NO' RIGHT PAL
- → NOT REALLY PRACTICAL

## Normothermic Regional Perfusion



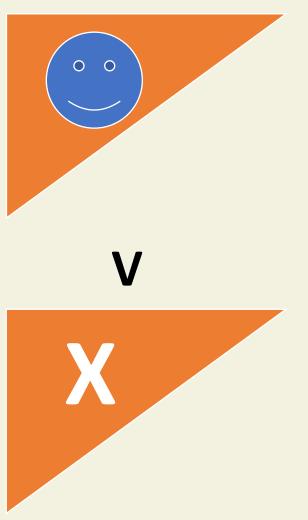
#### What does it mean?

- → NO' RIGHT PAL
- → NOT REALLY PRACTICAL

# Normothermic Regional Perfusion NICE RESULTS, PEOPLE

# Why NRP?

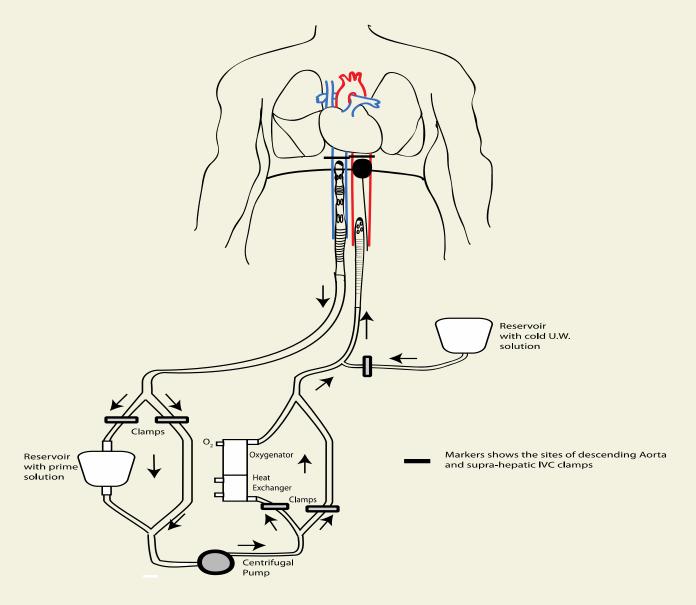


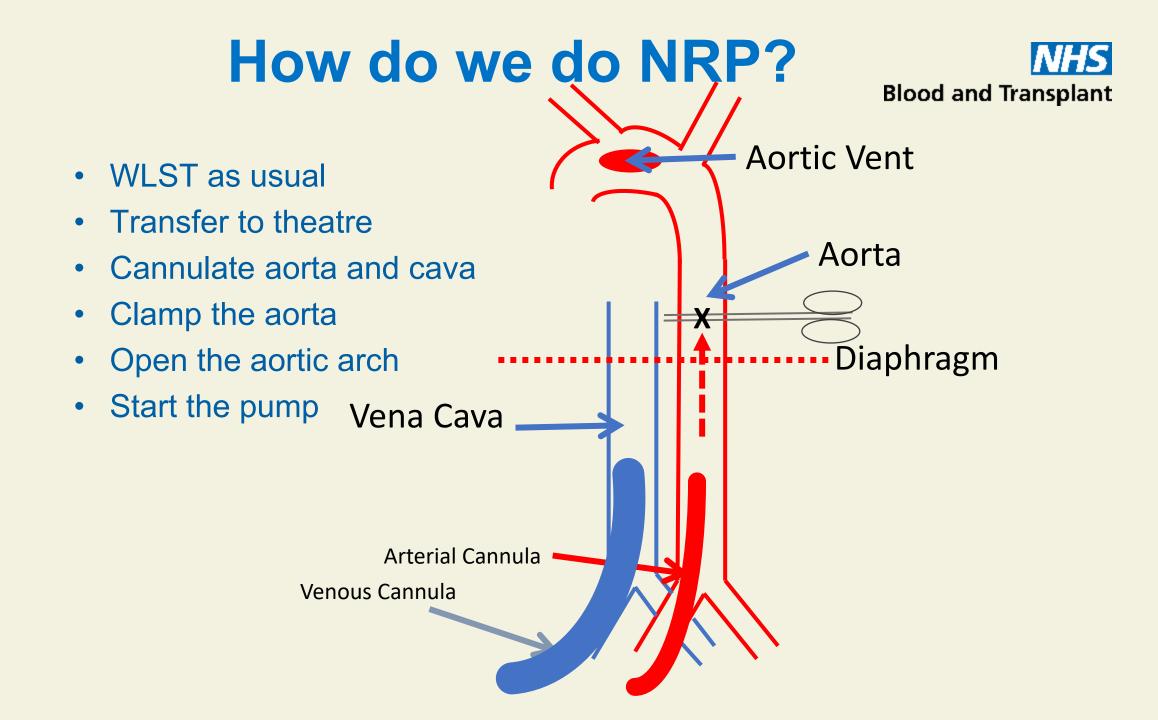


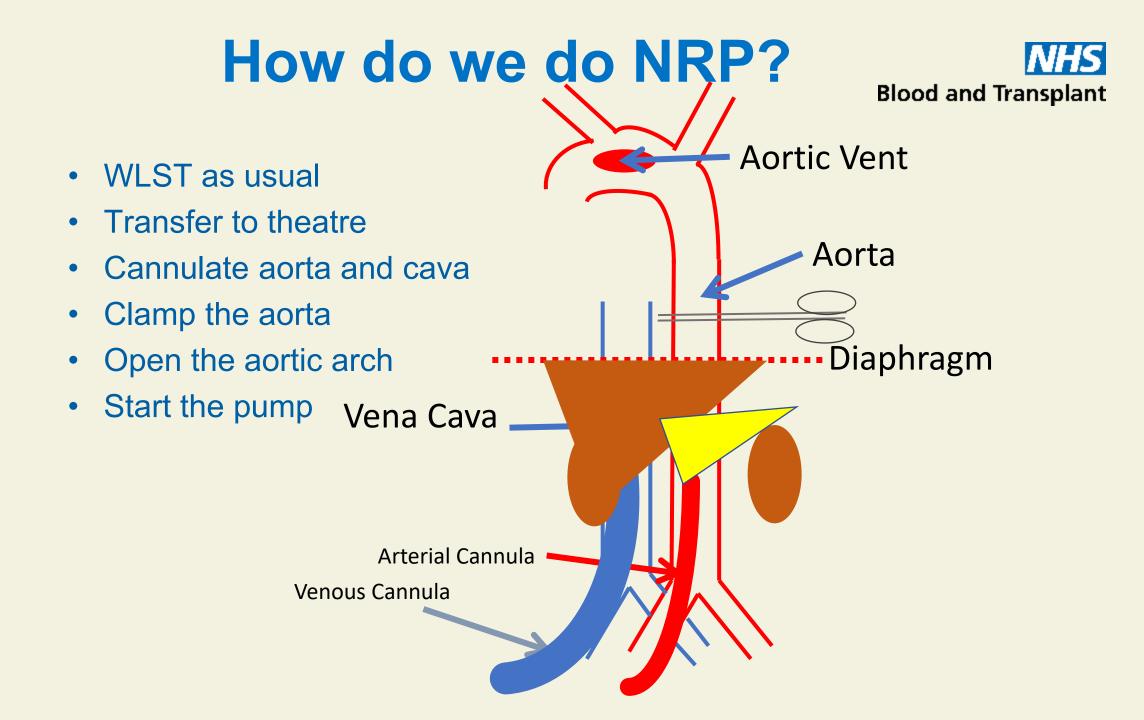
- DBD liver (50% of UK donors)
  - 1-2% non-function
  - 1% cholangiopathy
  - 80% of liver transplants
- DCD liver (50% of UK donors)
  - 2-4% non-function
  - 5-20% cholangiopathy
  - Re-graft rate in UK is 27%
  - 20% of transplants

# How do we do NRP?









# Oxygen uptake by organs

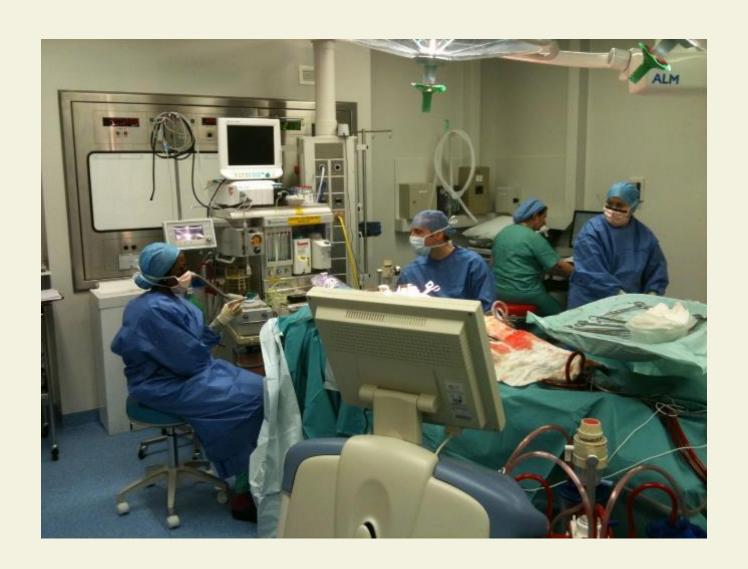




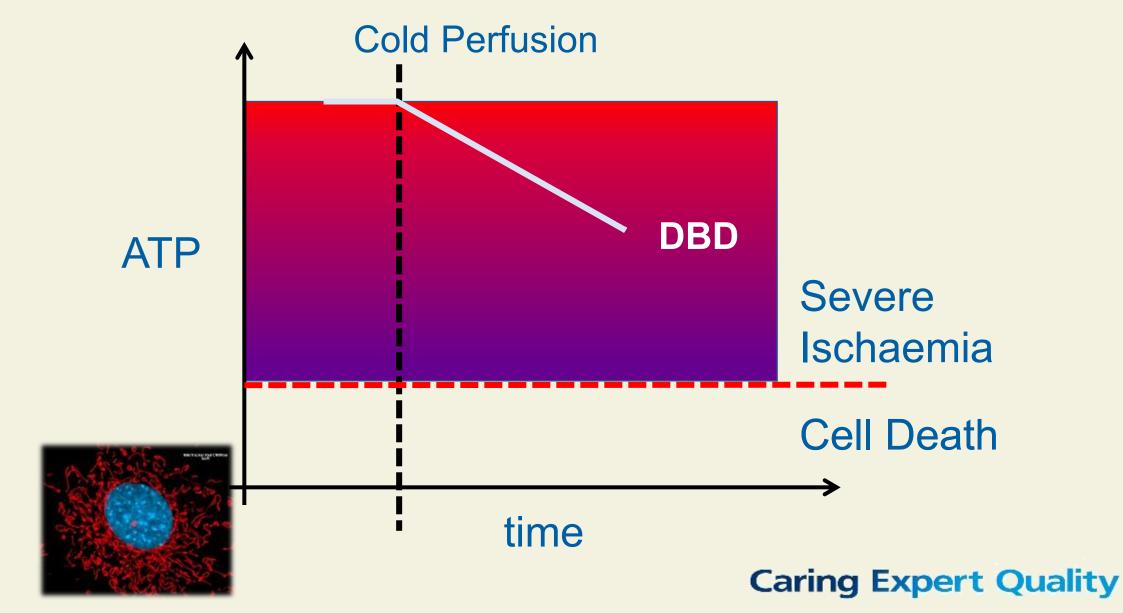
# **Better theatre environment**



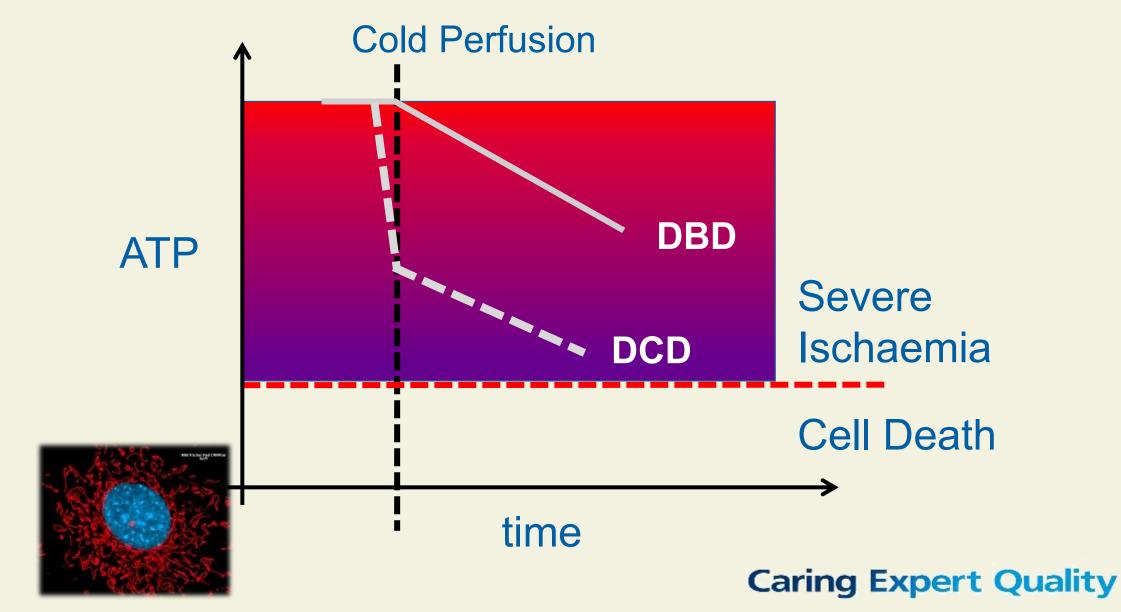
**Blood and Transplant** 



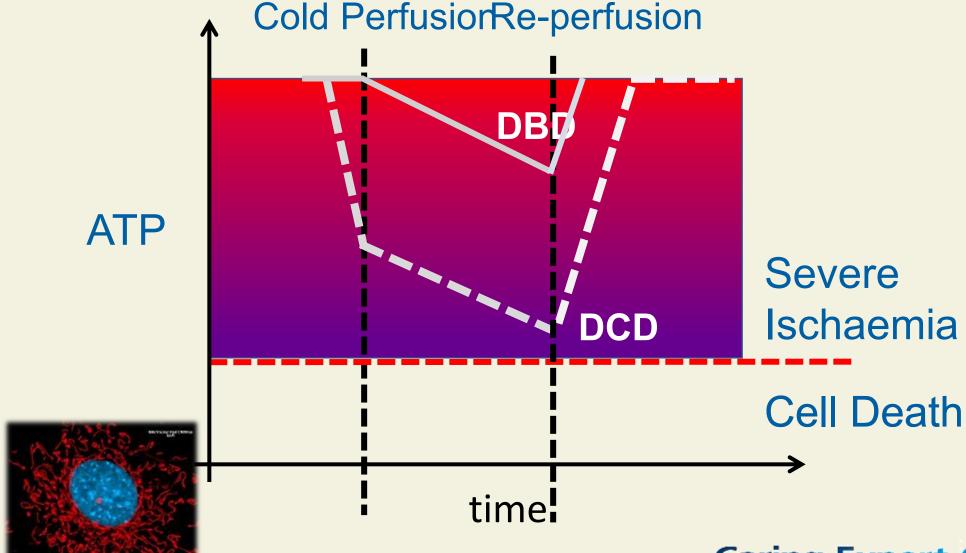






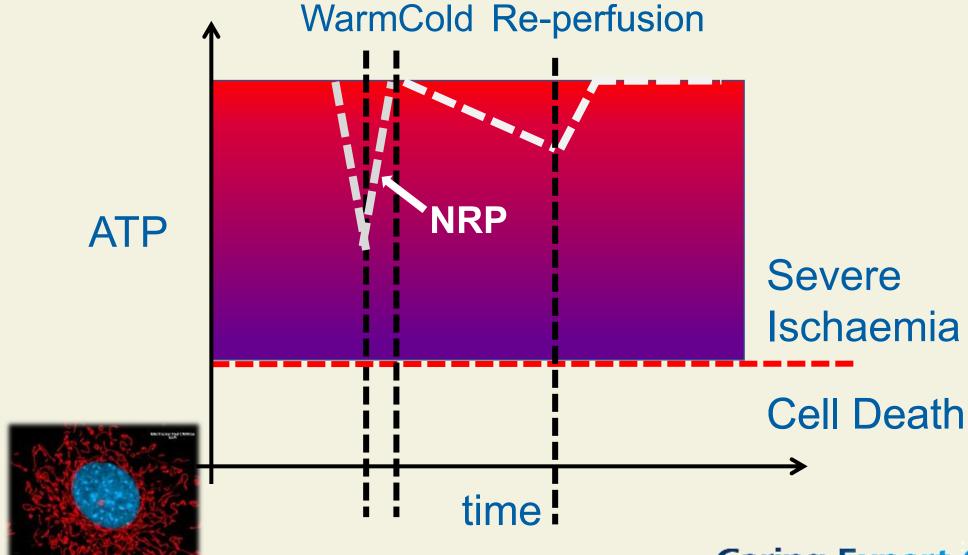






**Caring Expert Quality** 





**Caring Expert Quality** 

# **Graft Selection**



			1150	IONALP 1222	60'	1320 190'	135
BLOOD	RESULTS	RANGE	0	30"	7.54	762	7-6
77750	. pH	7,35-7.45	6.94	7.44	A603-5	23.5	24.3
	36+	25.45	115.7	35.8	4:00	371	3.83
	pCO2	4543	21.6	5.95		31-0	546
on.	pO2	3.64.9	5.43	19-4		Auft en Ben-	_
12	HCO3	22.6-26.8	27.2	29.5	31.0	8-1	7.6
VENOUS GASES	BE	3-15	2.2	6.7	8:0	137	137
9	Na+	135.145	139	138	138	5.9	59
2	K+	2,655	88	5-6	5.7	and the same of th	0.79
0	CsZ+	1.15-1.3	5:3	0-78	0.80	7.1	7.9
Ti.	Gluc	3.6-5.3	5.3	6-3	6.3		69
100	Lact	0.4-3.4	10:5	8.5	g. 6	80	21-2
Pa -	Het	35-48	119	21.1	20.7	16.8	102
here is	Hb	112-180	119	718	60 86.2	59	TUE
Chie	Sats	78-8856	45.3	68-5		-	1 4 5 50
BLOOD	RESULTS	RANGE	0	30'	60'	90'	120'
OF THE REAL PROPERTY.	pH	7,35-7,45	7.15 -	7-49	759		
	He	35.45	71.2	31-9	26.5	24-1	24.0
	pCO2	45-64	12.9	5.06	4.23	3.84	3 70
H	pO2	11.6-15.8	40.2	51-1	44-7	52.0	45-1
ARTERIAL GASES	HCO3	-3 - +3	26-1	are on stip	and as slip	MERCH	7.3
O	36	135-145	4.6	6.1	7.5	8.2	136
Z	Na+ X+	2.6-5,0	139	138	138	6.0	5.9
2	Cs2+	1.15-1.3	94	5.7	0.76	0.77	079
H	Gluc	3,6-5,5	49	6.3	6.2	71	7.7
2	Lact	6.6-1.4	97	6-3 8-6	6.2	6.1	6.6
10000	- Hct	35-40	11.44	21-1	20.7	14.8	212
fip#	Hb	115-180	135	27	41	22	123
michae	Sats	>94%	99.8	-	_	-	-
BLOOD	RESULTS	RANGE	0	30'	60'	90'	120
	8/0	3-21	65	6	7	-7	7
-	ALP	55-250	IR SL	72	71	71	-
>	ALT	18-50	1277	1522	1470	1315	72
	AST	10-40	2862	7652	75.60		1337
CES	Urea	2546	5.1	6.7	7569	2364	2395
FBC	Creat	60-120				8.8	9.5
BIOCHEMISTRY	Hb:	115-180	52	57	62	12 65	63
0		4-11	10.3	62	77	60	68
2	WCC	150-400	10-3	5	39	2.7	
m	Plat	170-400	173	150	147	141	140
	Cultures	9	NEG				NEC



#### Sources; Rachel Hogg, Statistics, NHSBT



#### QUARTERLY REPORT ON NRP RETRIEVALS

1 April 2015 - 31 December 2021

As at 8 April 2022

RAG(22)08

NHS BLOOD AND TRANSPLANT

**RETRIEVAL ADVISORY GROUP** 

DCD KIDNEYS RETRIEVED WITH OR WITHOUT NRP – ACTIVITY AND OUTCOMES



#### NRP v DCD; Retrieval and Tx

Table 1 Number of livers and kidneys offered, retrieved and transplanted

		NF	RP.	Non-	NRP
		SBP 50mmHg to NRP ≤30 mins	SBP 50mmHg to NRP >30 mins	SBP 50mmHg to cold perfusion ≤30 mins	SBP 50mmHg to cold perfusion >30 mins
Number	of donors	130	21	693	71
Liver	Number offered	129	21	637	62
	Number retrieved (% of offered)	99 (77)	15 (71)	287 (45)	13 (21)
	Number transplanted (% of offered)	80 (62)	12 (57)	197 (31)	4 (6)
Kidney	Number offered	130	20	689	71
(at least	Number retrieved (% of offered)	127 (98)	20 (100)	672 (98)	71 (100)
one)	Number transplanted (% of offered)	118 (91)	20 (100)	578 (84)	55 (77)

#### Cohort

This report presents data on UK adult (≥16) proceeding DCD donors that were attended by Cambridge or Edinburgh only between 1 January 2011 and 31 December 2020,



## NRP; Is Organ Damage Worse?

	Liver		Kid	ney
	DCD	NRP	DCD	NRP
Organs retrieved	257	155	1303	394
Damage (% of reported)				
None	203 (84%)	137 (95%)	1120 (88%)	334 (86%)
Mild	22 (9%)	6 (4%)	85 (7%)	30 (8%)
Moderate	13 (5%)	1 (1%)	50 (4%)	18 (5%)
Severe	3 (1%)	0 (0%)	13 (1%)	6 (2%)



# NRP; Is Organ Damage Worse?

	Pano	reas	Lung		
	DCD	NRP	DCD	NRP	
Organs retrieved	118	39	71	18	
Damage (% of reported)					
None	94 (89%)	34 (94%)	51 (78%)	16 (100%)	
Mild	4 (4%)	1 (3%)	8 (12%)	0 (0%)	
Moderate	3 (3%)	0 (0%)	4 (6%)	0 (0%)	
Severe	5 (5%)	1 (3%)	2 (3%)	0 (0%)	



# **ITU** stay

		Cambridge			E	dinburg	h
		Total	Total Reported	Median (IQR)	Total	Total Reported	Median (IQR)
ITU Stay	NRP	79	73	2 (2-4)	44	41	2 (2-2)
	DCD	133	130	3 (2-5)	34	32	3 (2-5)



#### **Liver Outcomes**

Table 3 Graft survival (%) for liver transplants by time between systolic BP reaching 50mmHg to start of perfusion

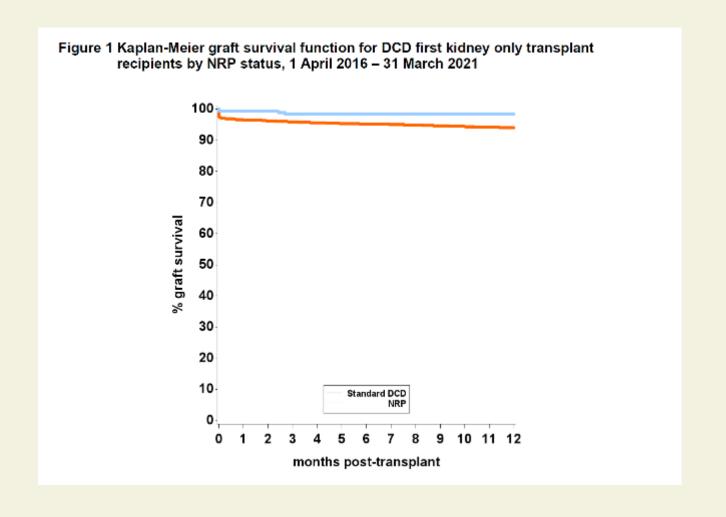
Donor type	Number of patients	1-year survival (95% CI)
NRP		
SBP 50mmHg to NRP ≤30 mins	70	97.0 (88.4-99.2)
SBP 50mmHg to NRP >30 mins	11	90.0 (47.3-98.5)
Log-rank p-value		0.3073
Non-NRP		
SBP 50mmHg to cold perfusion ≤30 mins	190	87.2 (81.5-91.2)
SBP 50mmHg to cold perfusion >30 mins	4*	· -
Log-rank p-value		-
Overall		
Overall NRP	81	96.0 (88.2-98.7)
Overall non-NRP	194	87.0 (81.3-91.0)
Log-rank p-value		0.0215

Table 2 Transplant survival (%) for liver transplants by time between systolic BP reaching 50mmHg to start of perfusion

Donor type	Number of patients	1-year survival (95% CI)
NRP		
SBP 50mmHg to NRP ≤30 mins	70	94.1 (85.0-97.7)
SBP 50mmHg to NRP >30 mins	11	90.0 (47.3-98.5)
Log-rank p-value		0.6631
Non-NRP		
SBP 50mmHg to cold perfusion ≤30 mins	190	84.7 (78.8-89.1)
SBP 50mmHg to cold perfusion >30 mins	4*	-
Log-rank p-value		-
Overall		
Overall NRP	81	93.6 (85.3-97.3)
Overall non-NRP	194	84.5 (78.6-88.9)
Log-rank p-value		0.0337
*Survival rates for groups with less than 10 tran	splants are not presented	due to small numbers



#### NRP v DCD; 1 year graft survival





### **Kidney outcomes**

Table 1 Numbe March 2021	r of kidneys retrie	ved and transplanted	l, by NRP status, 1 Apr	il 2016 – 31
Method	Number of kidney donors	Number of kidneys retrieved	Number of kidneys transplanted	% transplanted (of retrieved)
Standard DCD	2613	5176	4390	85%
NRP	198	394	345	88%
Total	2811	5570	4735	85%



#### **Centre Effect?**

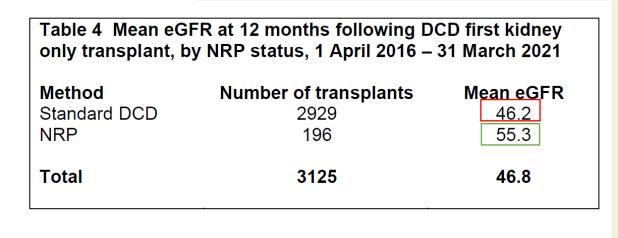
Table 2 DCD kidney transplants, by recipient centre and NRP status, 1 April 2016 - 31 March 2021

Recipient centre	Number of		dard DCD		NRP
	transplants	N	% at centre	N	% at centre
Belfast	132	128	97	4	3
Birmingham	203	181	89	22	11
Bristol	172	170	99	2	1
Cambridge	478	391	82	87	18
Cardiff	144	144	100	0	-
Coventry	65	60	92	5	8
Edinburgh	135	97	72	38	28
Glasgow	212	174	82	38	18
Great Ormond Street	1	1	100	0	-
Guy's	298	281	94	17	6
Leeds	295	282	96	13	4
Leicester	183	162	89	21	11
Liverpool	156	149	96	7	4
Manchester	456	431	95	25	5
Newcastle	162	158	98	4	2
Nottingham	152	143	94	9	6
Oxford	391	372	95	19	5
Plymouth	88	85	97	3	3
Portsmouth	119	118	99	1	1
Sheffield	98	87	89	11	11
St George's	138	135	98	3	2
The Royal Free	133	131	99	2	2 3
The Royal London	160	156	98	4	3
WLRTC	232	226	97	6	3
Total	4603*	4262	93	341	7



#### **Graft Outcomes; Kidney**

		s following DCD first kidney ril 2016 – 31 March 2021
Method	Number of transplants	1 year survival (95% CI)
Standard DCD NRP	3471 256	94.0 (93.1-94.8) 98.4 (95.8-99.4)
Log-rank p-value		0.0059
Total	3727	94.3 (93.5-95.0)



Risk adjusted eGFR; 7.6ml/min greater with NRP



# NRP; liver graft utilisation in Ed.

- Donor age expansion
  - > 30% of our NRP livers are >60 yrs (same as DBD)
- Functional warm ischaemic time increased
  - > Extends > 30mins (< 30 mins for DCD)
- No Primary Non-Function as yet (5.2% in DCD)
- No Cholangiopathy as yet (26.0% in DCD)
- 8hrs CIT with 'easy' transplants in DCD versus 12 hours CIT with re-do's/very sick for NRP



#### **Conclusions**

- Less Organ Damage for all organs
- Extended donor acceptance
- Greater CIT
- Shorter ITU stay
- Much better graft survival for liver and kidney
- 15% Better egfr at 1 year



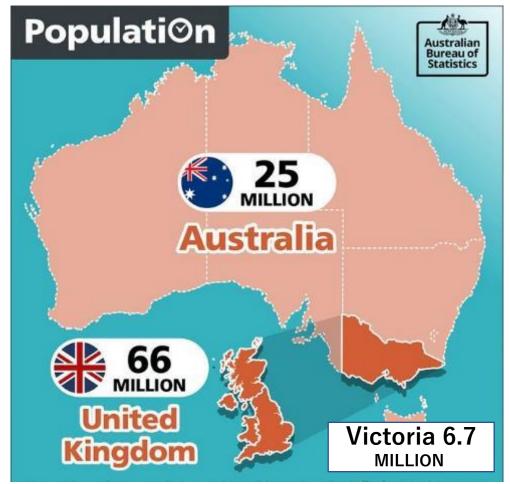
# Nice Results People

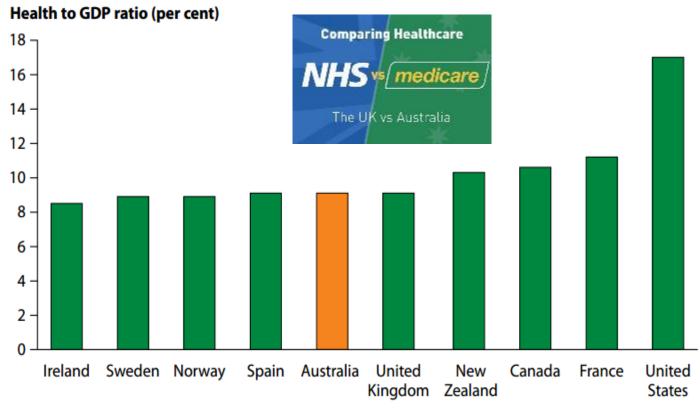
# Where do donor lungs for transplantation come from?: the Australian experience

Prof Greg Snell

Medical Head, Lung Transplant Service, Alfred Hospital Melbourne, Australia

# 1) Why am I talking to you?

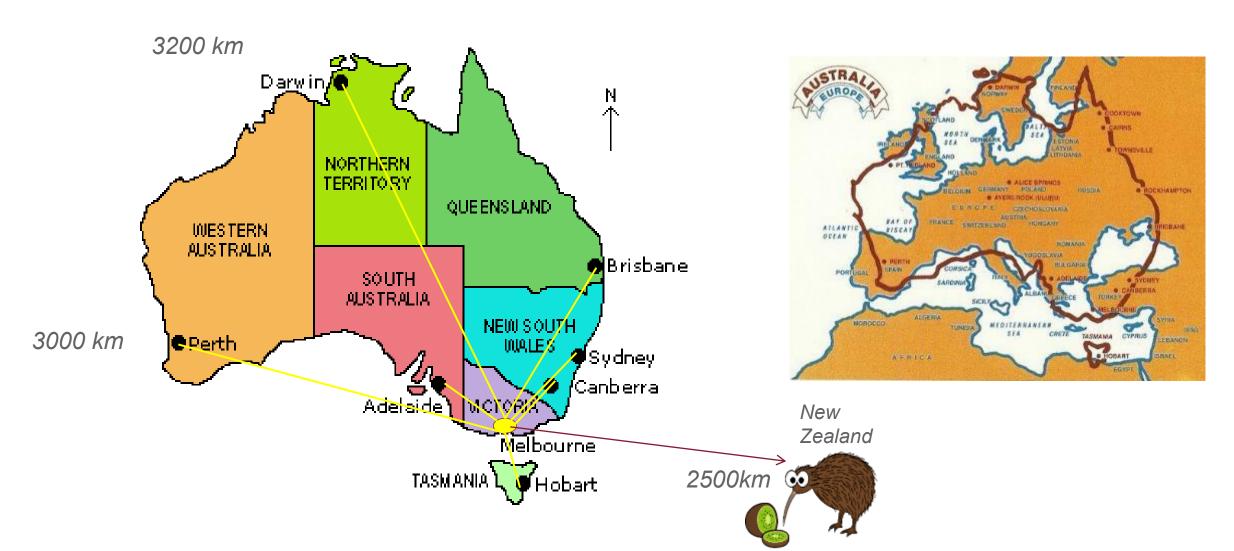




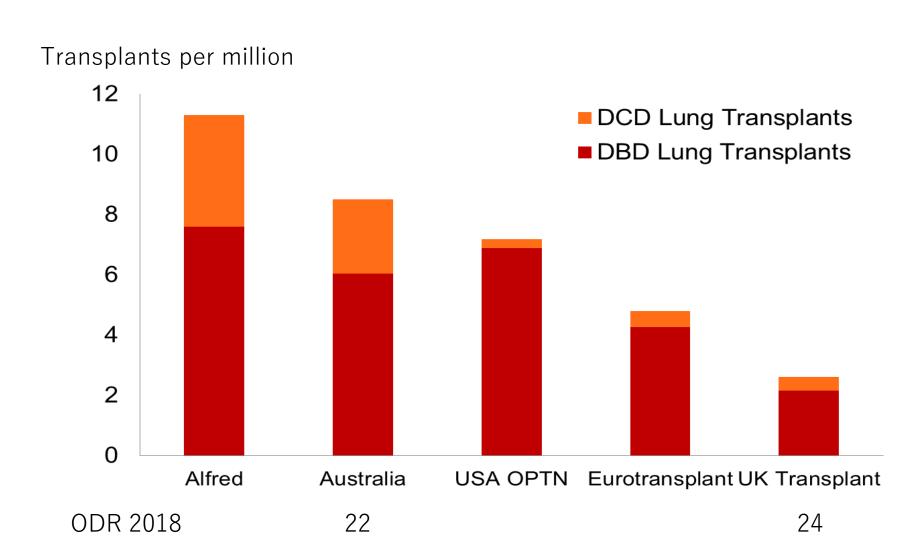
Source: AIHW 2013a.

Health expenditure as a proportion of GDP, selected OECD countries, 2011

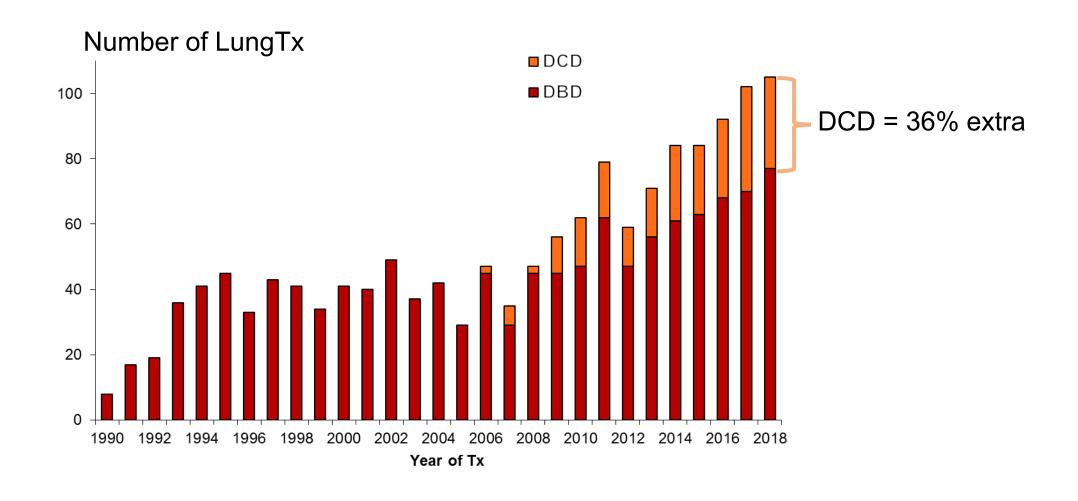
#### Alfred DBD & DCD donor lung referrals



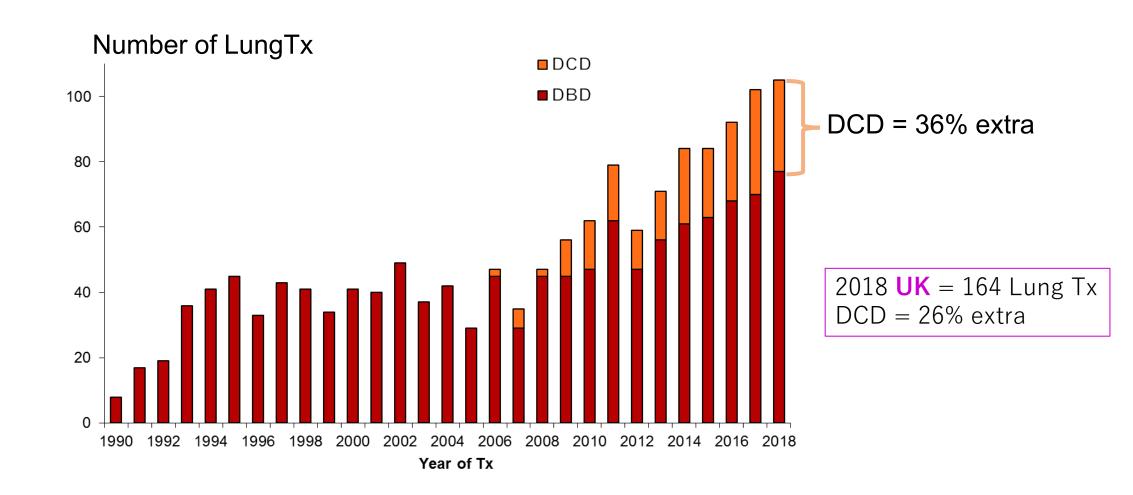
#### DBD & DCD lung Tx activity



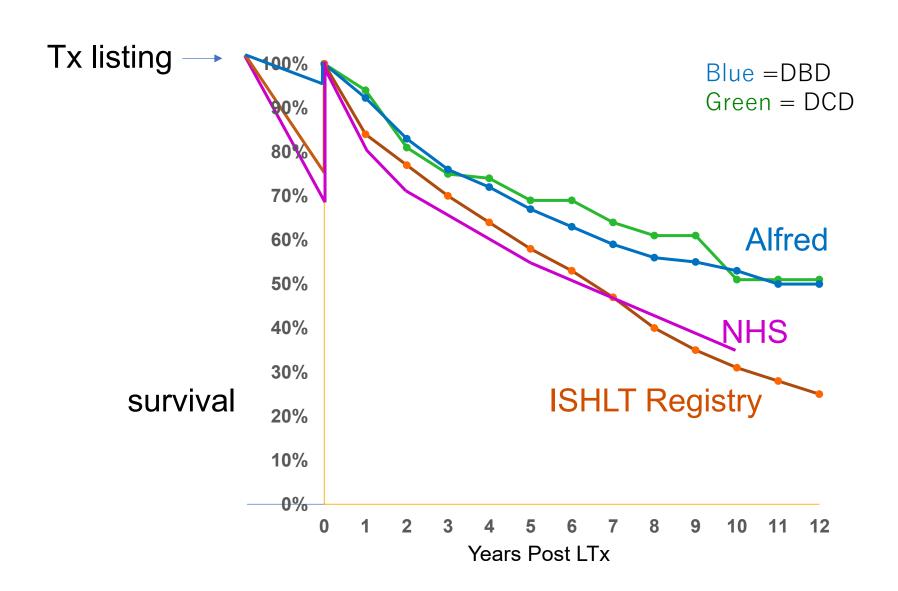
#### Alfred DBD & DCD Lung Tx



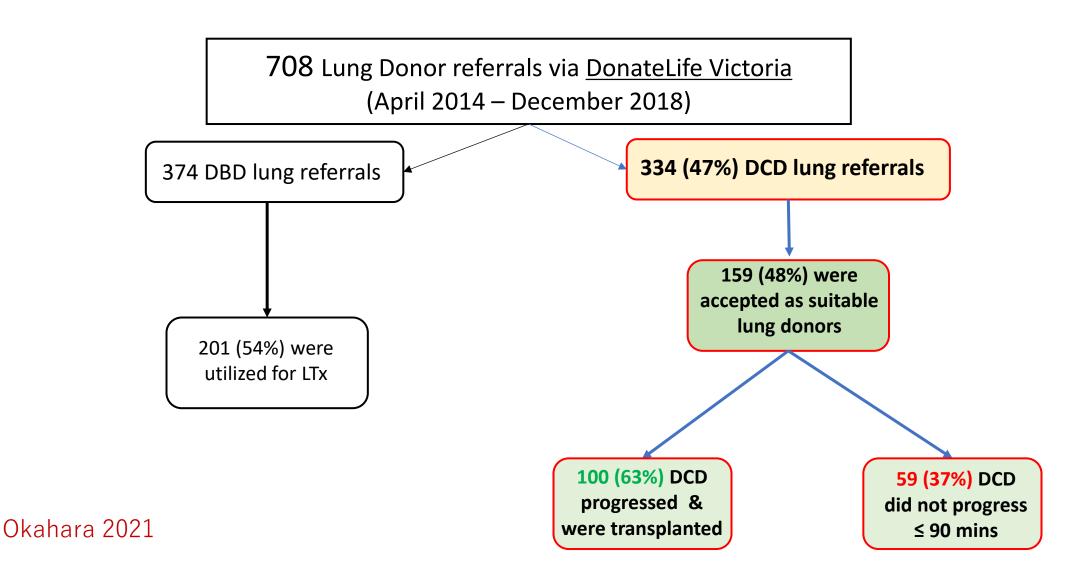
#### Alfred DBD & DCD Lung Tx



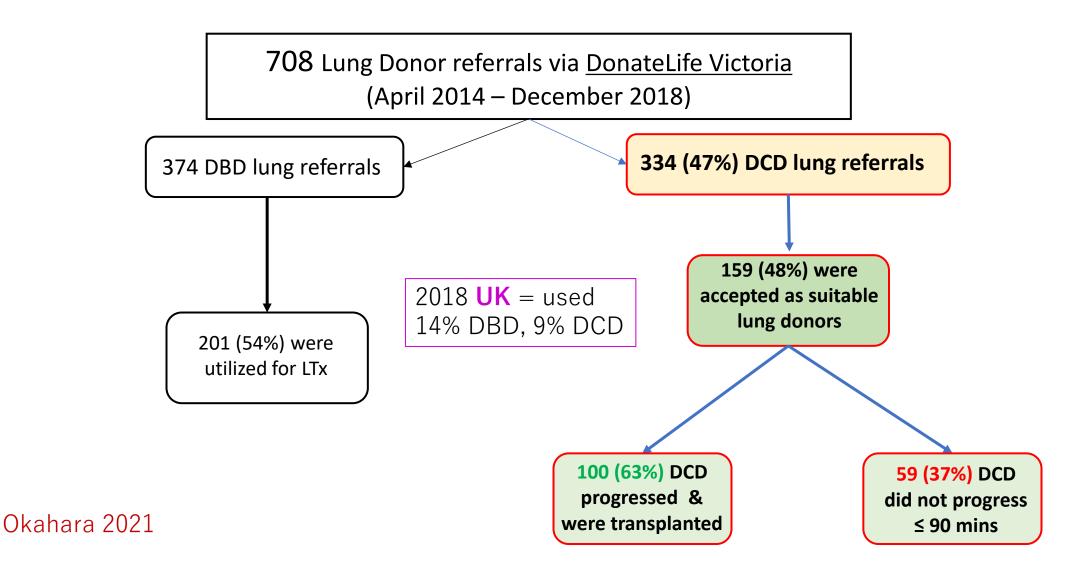
#### Alfred, NHS, ISHLT Registry survival



#### Alfred DCD lung donor referrals



#### Alfred DCD lung donor referrals



# 2) Alfred donor lung strategies & acceptability criteria

#### Lungs for donation & transplant (1)

- Many myths:
  - 'Not many are good enough to use'
  - 'Too damaged by processes leading up to to death (eg donor smoking, trauma, aspiration), resuscitation & ICU complications (eg infection, fluid management)'
  - 'Frail little sponge'
  - 'Not many lung transplants needed or done'
  - 'Lung transplants don't work'

#### Lungs for donation & transplant (1)

- Many myths:
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  - 'Too damaged by pocesses leading up to to death (eg donor snok not a ma, aspillion), esuscitation & ICU complicates seginfection, uid hanagement)'
  - 'Frail littl
  - 'Not many lung transplants needed or done'
  - 'Lung transplants don't work'



#### Lungs for donation & transplant (2)

- It turns out:
  - Lungs are useable in approx. 50% of all donors that yield any organ for Tx
  - Lungs can recover from fluid, bruising, consolidation, asthma, aspiration quickly
  - Lungs contain  $O_2$  at time of death = ischaemia resistant (eg no post-arrest damage syndrome per se). Lungs survive 2hrs post arrest with NO support.
  - Ex-vivo lung assessment & resuscitation is possible
  - Many lungs needed
  - Lung transplants do work & save lives

#### Lung donor criteria for LungTx

	Conventional	Alfred Extended
Age CXR	<55yrs normal	<75yrs SLTx if unilateral changes BLTx if bilateral changes repeat post-bronch/PEEP etc
ABG	>300mmHg	>250mmHg repeat post-bronch/PEEP etc
General	no aspiration no secretions -ve gram stain <20pk year Hx DBD	accept if PaO <sub>2</sub> /CXR ok <30pk year Hx DCD

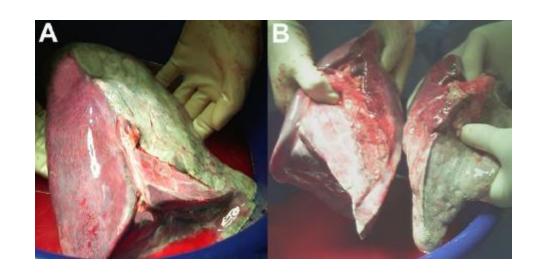
Williams Sem Resp Med 2001 Westall Curr Resp Rep 2013

#### 'Ideal' donor criteria are rarely met

$$128/130 = 99\%$$

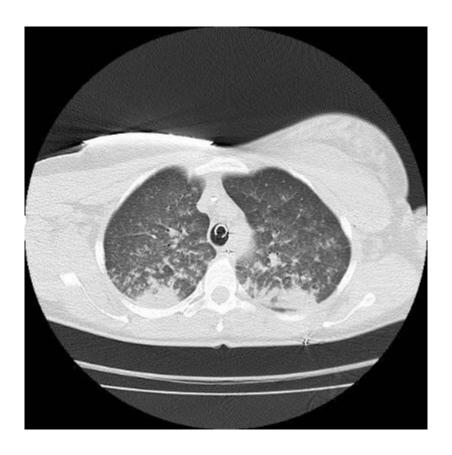
$$107/130 = 83\%$$

- → <5% of all donor offers 'ideal'
- → <10% of all donors used 'ideal'



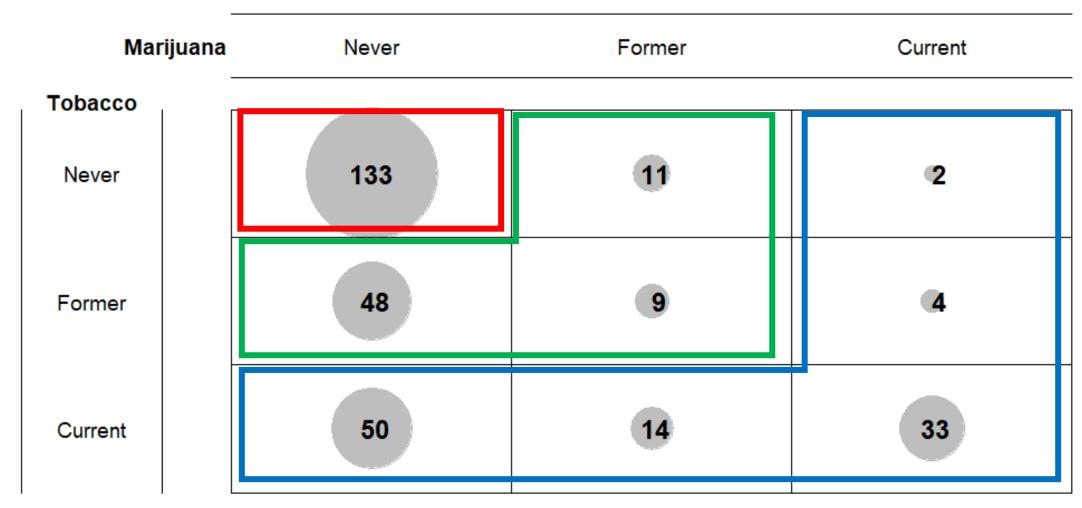


#### Lungs that worked

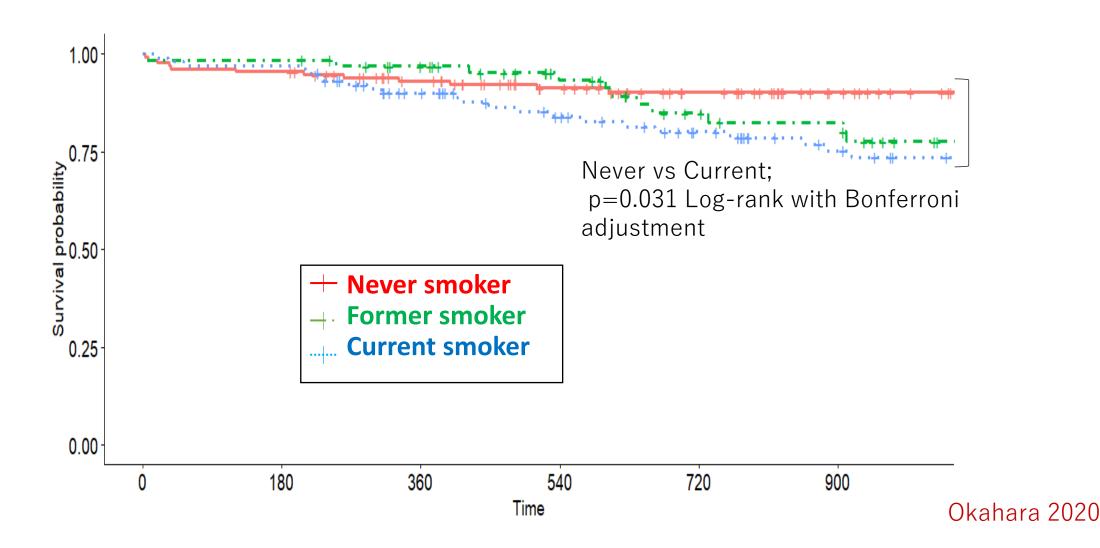


#### Donor smoking history (n=304)

Never smoker; 133 Former smoker; 68 Current smoker; 103



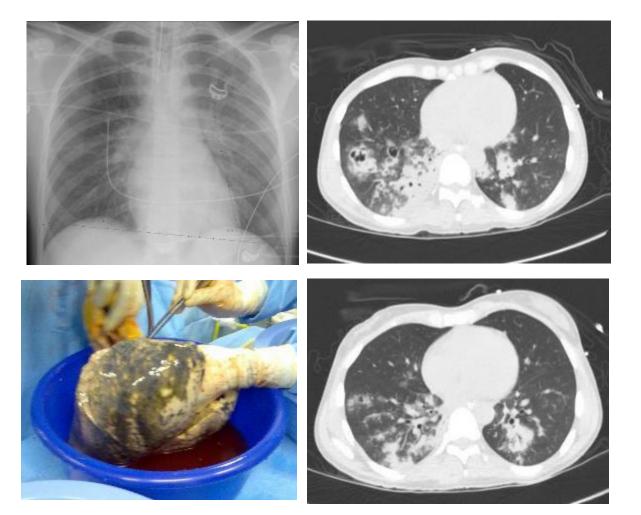
#### 3-year LTx survival vs donor smoking history



### 3) Alfred donor lung refusals

#### Lungs that wouldn't work!

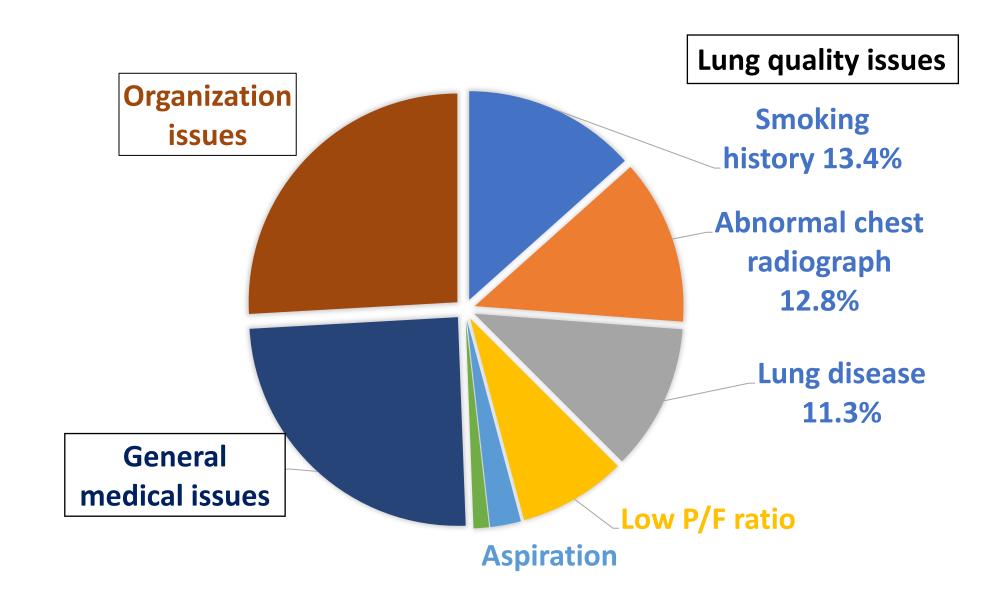
28 yr marijuana smoker



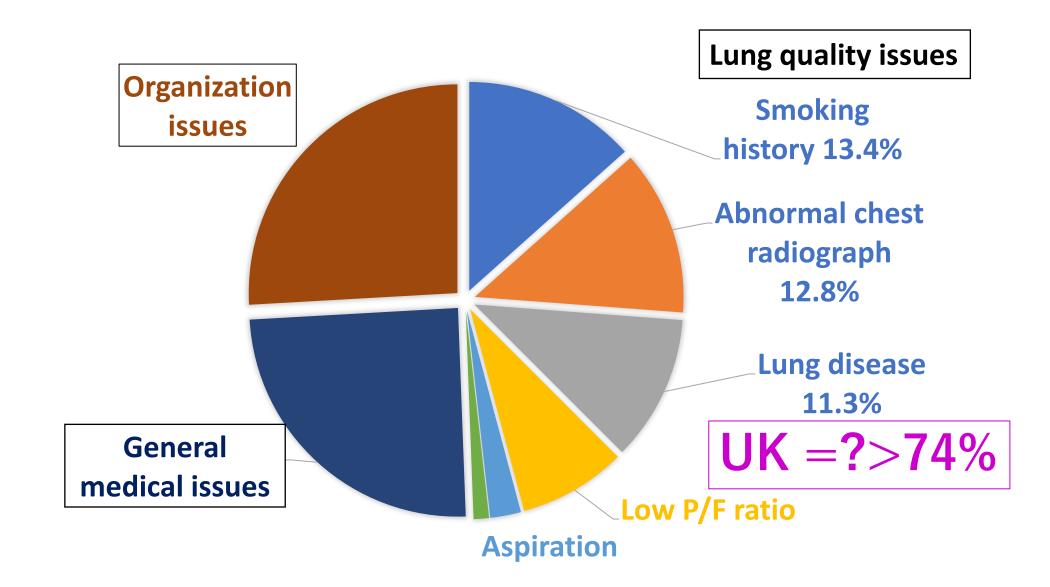
35 yr tobacco smoker



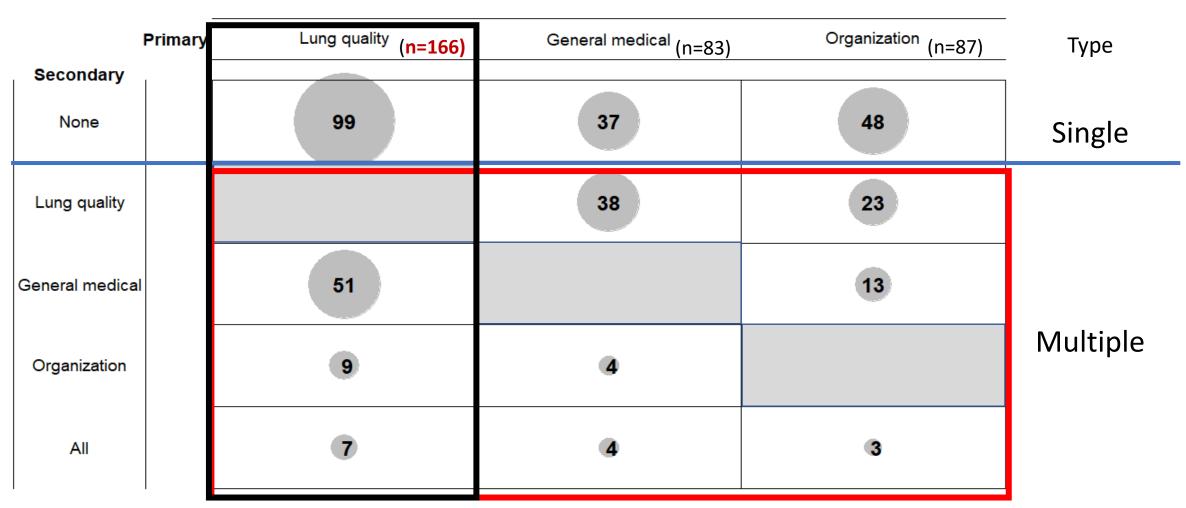
#### Primary reason for lung Tx donor lung refusal (n=376)



#### Primary reason for lung Tx donor lung refusal (n=376)



#### Refusals commonly have major comorbidities (n=336)



Okahara 2020

#### Declined lung donor refusal categories

Lung quality issues	General medical issues	Organization issues			
Abnormal arterial blood gases (low P/F ratio)	Advanced age	Logistics (Operating room, Timing, Staff, Distance, Transport issues)			
Abnormal chest imaging (X-ray/CT) including Pulmonary edema	Active infection (Pulmonary/Systemic)	ABO/X-match incompatible			
Lung disease (COPD, IP, Pulmonary fibrosis etc)	High risk behaviour/drug use	Size incompatible			
Aspiration	Hepatitis C	Withdraw of consent			
Smoking history	Other disease (pulmonary embolism, ECMO)				
Other (including trauma with lung contusion)	Cancer	Yellow box = ? fixable			

#### Potential for EVLP assessment for refused donors

	Possible EVLP cases	EVLP Eligibility details (from trials) ~ 60% of our cases!							
		P/F ratio	Abnormal CXR	DCD	Age >55 years	Multiple transfusion	Aspiration	Extra assessment	Timing t assistance
n=366									
Lung quality issue	n = 52	25	47	24	21	5	16	-	-
(Realistic)	(16)	(11)	(14)	(7)	(12)	(0)	(3)		
General medical issue	n = 4	1	1	1	3	1	0	3	-
Organization issue	n = 10	4	5	8	5	2	1	-	10

<sup>= 8-18%</sup> of refused donors could have been assessed with EVLP

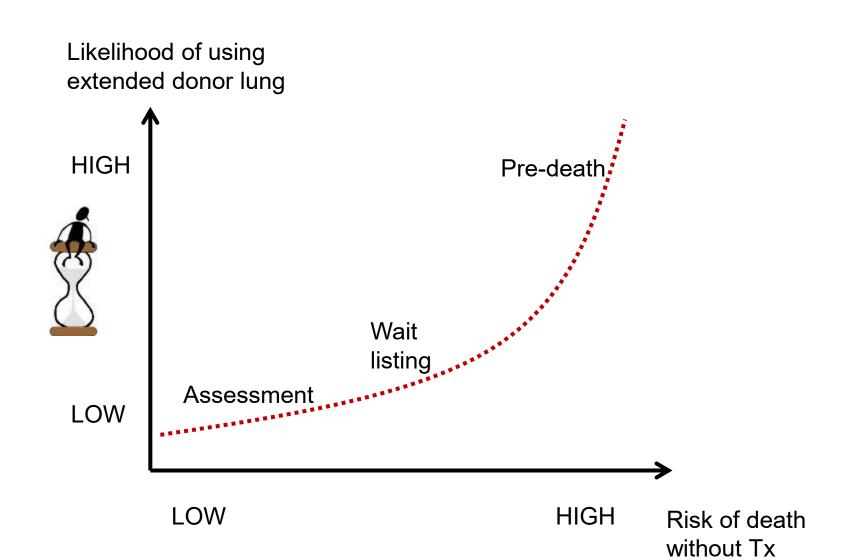
<sup>= 4-9% &#</sup>x27;extra' transplants (50% conversion expected using EVLP)

# 4) Donor lung suggestions & strategies

#### The ICU donation team & 'extended' donors

- ICU has a lung donor Mx Guideline
- Lung Tx Team Donor lung 'Helpline'
- Not all potential donors (or recipients) are equal in terms of the Tx team:
  - Greater Tx team desperation for sick recipients
  - Size makes a bigger difference than for other organs
  - Blood Gp O, average height, will have lots of potential recipients
  - We do single lungs too!
- If the lungs might be improved & used then 'extra' work may help:
  - -Suction, bronchoscopy, fluid removal, proneing
  - -Serious antibiotics in 100% of lung donors
  - -Repeat ABGs & CXR
  - -CT chest
- Suggest regular debrief/followup between teams after donation to give +ve/-ve feedback

## Tx teams 'extended' donor lung use strategy- what the Intensivist wont know



#### The Lung Tx Team & 'extended' donors (1)

- Lung Tx Team Donor lung 'Helpline' best a physician
- Potential channel for Tx Physician feedback re: donor concerns/thoughts to Donation Team & Intensivist, (surgeon to sleep/operate)
- Assume donor lungs work, recipients are the problem! Think of resuscitating donors
- Never completely trust anyone on donor acceptability
- Know your Lung Tx waiting list
- Balance potential recipient & team needs via Tx Physician to Tx surgeon discussions ie use senior staff
- Tx Unit ICU 24/24 Intensivist in ICU
- Tx Unit culture of support for decisions
- Audit 100% of cases rejected

## Suggestions to increase donor lung utilisation

- Communicate- lung 'Helpline' ie Tx physicians do more work
- Resuscitate lung(s)
- Accept bruising, aspiration story, asthma, Cigs <30pk years</li>
- Accept imperfect numbers/features
- Consider very good/excellent donors up to 75 years
- Lung only organ donors are possible
- EVLP is not the answer
- Get senior staff involved
- Benchmark/Audit UK real reasons for not accepting lungs

### 5) Conclusion

#### Australian lung donor journey conclusion

- Working across a whole continent, we use arguably the world's highest proportion of donor lungs, but there are still lots out there.... (another talk!)
- As shown in the Australian donation system, communication & increased involvement of physicians & intensivists have the largest role to play
- Guidelines, audit, definitions & benchmarking are required

#### Acknowledgements:











Special thanks: Dr Shuji Okahara, A/Prof Bronwyn Levvey



## **Keynote Speakers:** Q&A

Please go to <a href="https://www.menti.com">www.menti.com</a> on your smartphone or tablet and enter code 2919 9319







#### **A Patient Journey**

Vicky Gerovasili
Dr Hannah Kilbride
Robert Burns
Steph Thomson
Dr Agimol Pradeep



#### A Patient Journey: Introduction

Vicky Gerovasili



## A Patient Journey: Referring Physician Perspective

Dr Hannah Kilbride



# A Patient Journey: Patient Perspective "Who is really taking the risk?"

Robert Burns

Heart Transplant Patient
Cardiothoracic Transplant Patient Group Chair

# Patient Perspective – Who is really taking the risk?



- What is risk?
  - "the possibility of something bad happening" (Cambridge Dictionary)
- Need heart transplant something bad has already happened
- Risk in this context is something even worse happening;
  - Risk mitigation reduce chance
  - Reduce trauma

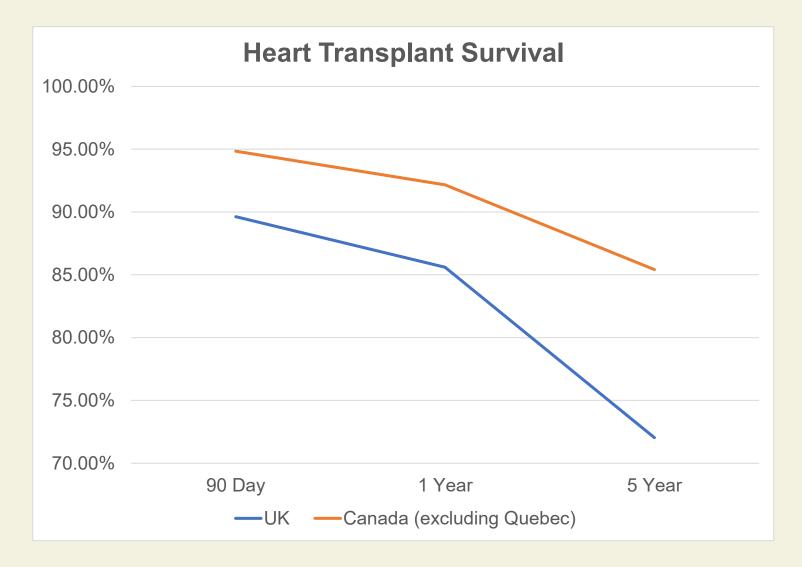
# **Improve Organ Utilisation**



- What is utilisation?
  - "the act of using something in an effective way" (Cambridge Dictionary)
- Two fold;
  - Use Increase donation to transplant %
  - Effective Recipient to live a long and happy life

### What is Survival Like?





## What is Quality of Life Like?



- → Not currently measured
- →Anecdotally many transplant patients struggle (physically and mentally)

# Factors influencing effectiveness?



- Acceptance criteria
- Transplant timing
  - Referral timing
  - Waiting time
- Patient optimisation
- Post transplant care
  - Hospital phase
  - Life long care

# Factors influencing effectiveness?



- Acceptance criteria ✓
- Transplant timing
  - Referral timing?
  - Waiting time X
- Patient optimisation X
- Post transplant care
  - Hospital phase √
  - Life long care X√

# Factors influencing effectiveness?



- Acceptance criteria ✓
- Transplant timing
  - Referral timing ?
  - Waiting time X
- Patient optimisation X
- Post transplant care
  - Hospital phase ✓
  - Life long care X
    √

# **UK Heart Transplants**



- 163 Heart transplants 2020-21 (4.8% SOT)
- 80% Heart transplants from urgent / super urgent list
- Pathway urgent / super urgent patients
  - Wait in hospital, frequently months even years, by 1 year 71% received a transplant
  - Completely life changing for whole family
- Routine Patients by end year 3 just 17% transplanted from routine list

# **Experience waiting for urgent heart transplant**



- Typically 20-30 patients all the time
- Isolation
- Institutionalisation
- Boredom
- Deconditioning
- Chronic sleep deprivation

# What is the impact of this?



- Sub optimal for the transplant
  - Poor mental state
  - Exhausted
  - Family and financial challenges
  - Physically deconditioned

## How do we optimise patients?



- Shorter waiting times
- Prehabilitation programs
- Appropriate inpatient environments
- Stimulation and family support

# **Summary / Key Messages**



- Patients are in a high risk situation
  - Risk reductions
  - Support
- Improve Utilisation
  - Use increase conversion from donation to transplant
  - Effective Patient optimisation and excellent aftercare



# A Patient Journey: Specialist Nurse for Organ Donation Perspective

Steph Thomson

Scotland Team - Paediatric Lead



# Things that impact Organ Utilisation

- Before Authorisation (consent)
- During formal Authorisation
- After Authorisation



#### **Before Authorisation**

- Timing of referral earlier is better
- Is this hospital familiar with Donation?
- Access to the right people medical/nursing, relatives
- Access to the right information social, medical
- General donor pool deteriorating health??



#### **Authorisation/consent formal discussion**

- Timing are the family ready for you to discuss donation?
- DBD/DNC Has the patient been OR could they be tested?
- Should the family be offered DCD if DBD/DNC has been confirmed?
- Why might relatives be reluctant to agree to retrieval of specific organs/tissues?
- Asking the tricky questions



#### **Procurator Fiscal/ Coroner**

- May need guidance form Forensic Pathologist before agreeing to donation/ retrieval of specific organs
- Work ongoing within our organisation to help them understand things better from our perspective in the hope they will give consent/ impose fewer restrictions



#### Post Authorisation/consent

- Availability of services within donating hospital
  - Cardiac monitoring
  - Echocardiography in and out-of-hours
  - Expertise of operator trainee, consultant, technician
  - Ability to interpret and comprise a suitable report
  - Ability to transfer images to potential accepting centres
  - Availability of scout



#### Post Authorisation/consent

- Donor Optimisation
  - Knowledge base of SNOD
  - Ongoing project looking at improvement
  - Availability of transplant surgeon/RcPoCs for advice
  - Time can ICU support this patient for longer?
  - Family are the family comfortable with length of process being extended?



#### Post-Authorisation/consent

- Screening/Offering
  - Donor blood group potentially offering to fewer potential recipients
  - BBV more donors with BBV, offering to specific groups
  - Screening donor may have screened in but then organs are not accepted when offered.



#### Post Authorisation/consent

- Acceptance by transplant centres
  - Multiple offers
  - May already have ongoing surgery
  - Location distance between donating/receiving centre
  - Logistics timings, weather, availability of transport



#### **Theatre**

- Availability of space and personnel
- ? Night-time retrieval
- Intra-operative and backbench findings
- Availability of Histopathology in/out-of-hours
- Late declines and fast-track



#### Conclusion

- Lots of challenges for the SNOD at each stage throughout the donation process
- Always keen to try our best to achieve a good outcome for both donor family and recipients
- Projects ongoing to support us to improve as we move forward







# A Patient Journey: Recipient Coordinator Perspective

Dr Agimol Pradeep BEM

Transplant Recipient Co-Ordinator King's College Hospital, London





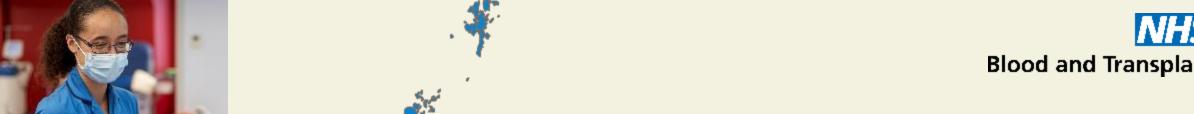
# Role of Transplant Recipient Coordinator

To support and guide the recipient through their transplant pathway

Begins when a patient is referred for consideration of an organ transplant

Follows the recipient though the whole process into long term post transplant follow up care

**Caring Expert Quality** 





There are over 250 Recipient Transplant Co-ordinators in the UK

Based at 27 transplanting units

**Caring Expert Quality** 

# Role of a Recipient Coordinator

Screen referrals and discuss with Consultants and decide assessment pathway

First telephone contact with the patient

Gathering information for patient's assessment

Organising the transplant assessment

Talking to and educating the patient and their family about transplantation



**Caring Expert Quality** 







1

Listen first for what he/she wants to tell



2

Be vigilant - identify for what he/she does NOT want to tell



3

Acknowledge what he/she cannot tell





## **Role of Transplant Recipient Coordinator**

Blood and Transplant

- Collating the results from assessment investigations and discuss in MDT
- Point of contact for the patient at all stages of the assessment
- Preparing the patient for listing
- Listing the patient on the transplant waiting list
- Monitoring the patient whilst listed
- Suspending the patient from the waiting list when necessary
- Co-ordinating the transplant operation





## Role of Transplant Recipient Coordinator



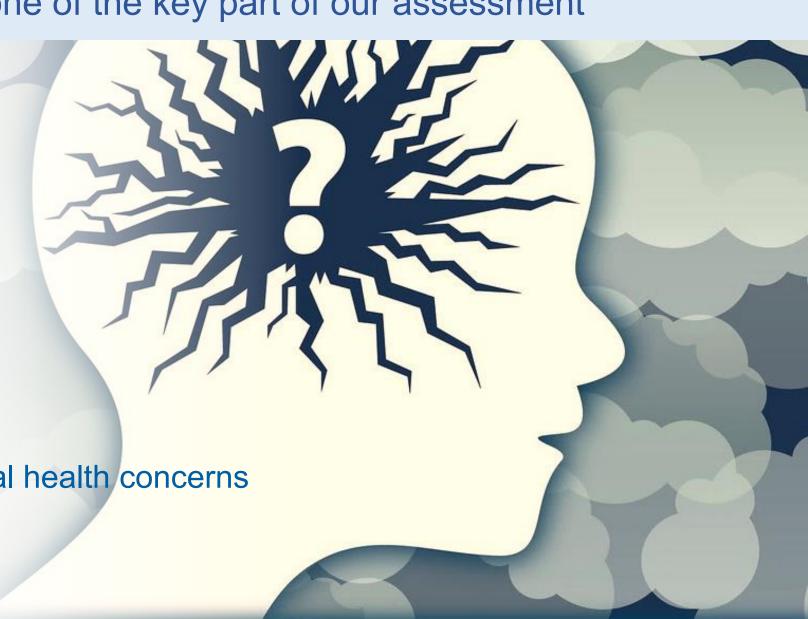
- Post transplant education before discharge from the hospital
- Preparing the recipient and their family for discharge
- Telephone advice
- Monitoring the recipient in clinic post transplant
- Help with internal and national transplant Audits



# **Transplant Assessment**

Psychosocial evaluation is one of the key part of our assessment

- → Support
- → Financial support / housing
- → Compliance with medications and hospital appts
- → Knowledge deficits
- → Anxiety / depression or mental health concerns
- → Substance abuse





#### **On call Commitment**

team

#### Point of contact Donor offers Communicate **Patient Contact** Point of contact Screen through Communicate Contact Patient potential donor with NHSBT for NHSBT Hub, and notify SNOD's, MDT offers and **Hub and SNOD** regarding a potential offer members, discuss with regarding patients and decision. Consultant on call and relevant family members of the

### **On call Commitment**





Organise transport for patient and organ



Organise admission including ward and ITU bed



Organise pre transplant admission, investigations and review



Organise any special treatment if required prior to transplant

#### **On call Commitment**



#### Communicate Transfer Communicate Organise Post Transplant Communicate Organise Transfer Communicate Post Transplant patient to with patients' with SNOD transplant -Theatre (most Team and any family and act and update update satisfying and as point of records and **Transplant** necessary rewarding part Surgeon contact during tests or family of our role) accordingly re; investigations the surgery retrieval and (example: timing donor organ biopsy)

#### Recipient Coordinator Role in Organ Utilisation



**Blood and Transplant** 

#### **Patient advocates**

Point of contact, rapport made with patient and families provide them confidence to notify us re; any concerns or worries. We make them feel valued.

# Critical thinking skills and clinical knowledge:

Familiar with waiting list and able to navigate around according to the patient needs and donor characteristics. Knowledge on donor grafts and high risk donors, confident in counselling patients on the same

#### Access and networking with MDT members:

Expertise and confidence to reach out for help and guidance. Example: to discuss re; marginal or high risk donor offer

**Caring Expert Quality** 



#### Recipient Coordinator Role in Organ Utilisation





### Communication, Organisational and Interpersonal skills:

Example: Utilised an organ which was declined by all centres on history. On visualisation NORS surgeon felt differently & informed the transplant coordinator. Communicated same with on call Surgeon and co-ordinated from the patient aspect and organised transplant team in timely manner, and successfully transplanted the organ.

#### **Leadership and Negotiation Skills:**

Accountable for whole transplant process.

Often, have to lead conversation with SNOD's, other

Transplant centres and MDT members with logistical issues
to avoid; organ decline due to lack of resources & complex
transplants happening during out of normal working hours.

#### Patient outcome is important:

Communicating donor characteristics with the care team. Example CMV status, positive perfusion fluid result etc, which may impact recipient outcome.





Organ utilisation: It's all about avoiding the patient missing that precious life saving opportunity

# Thank you for listening

**Caring Expert Quality** 

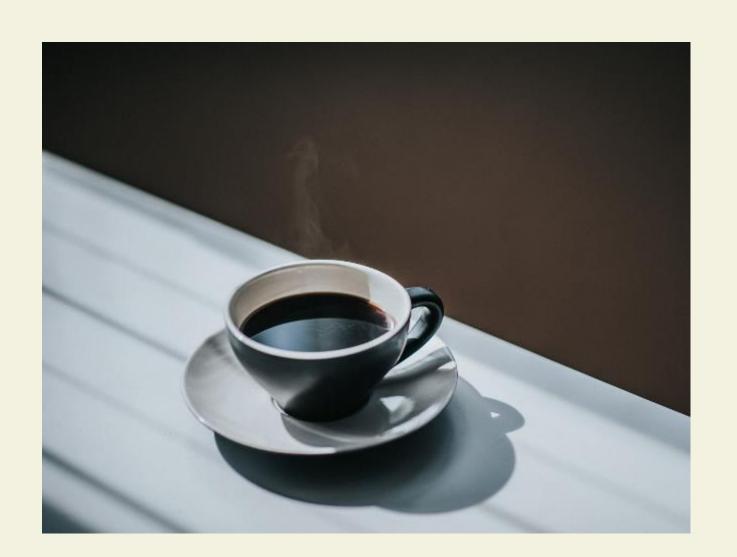


#### A Patient Journey: Q&A

Please go to <a href="https://www.menti.com">www.menti.com</a> on your smartphone or tablet and enter code 2919 9319







#### **Morning Break**

11.35 - 11.45

Sessions will resume promptly at 11.45.





# **Culture: Organ Utilisation**

Helen McManus

Lead for Education & Culture

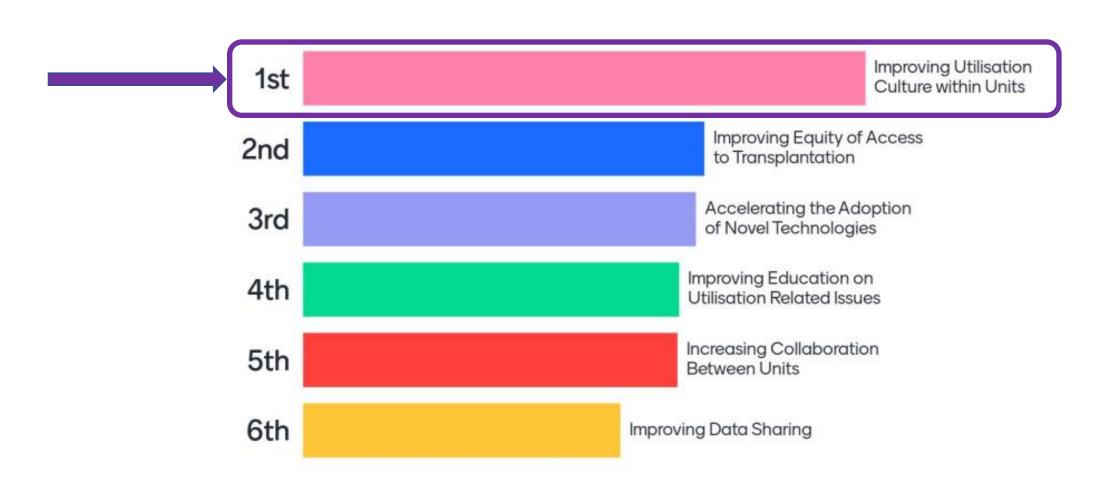
Derek Manas

OTDT Medical Director NHSBT

Organ Lead CLUs

**Caring Expert Quality** 

# Rank the following priorities for the organ utilisation programme:



#### Aims today:

Case study

Promote discussions \*\*



Listen to cultural challenges (2)



Recognise any cultural successes





Journey

**Caring Expert Quality** 





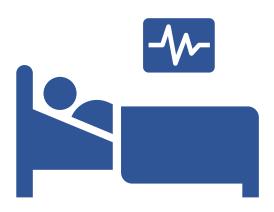


"Culture is the way we do things around here. It is the norms, rituals, expected behaviours and unwritten rules within a work organisation"

"Culture is vital because it shapes our behaviour and values at work"

Professor Michael West Head of Thought Leadership, The King's Fund







# Case study

48-year-old - Sub arachnoid haemorrhage

Consent for Donation after Circulatory Death (DCD)

Heart

Lungs

Liver

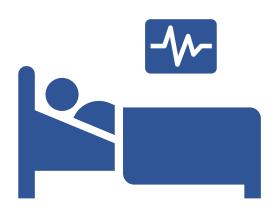
**Kidneys** 

Pancreas

Eyes

Referral, assessment & consent





# Case study



48-year-old - Sub arachnoid haemorrhage

Downtime 28 mins

Heart function - echo - ejection fraction 59%, normal LV function, good systolic function

Donor type – DCD

Ventilated – 48hrs

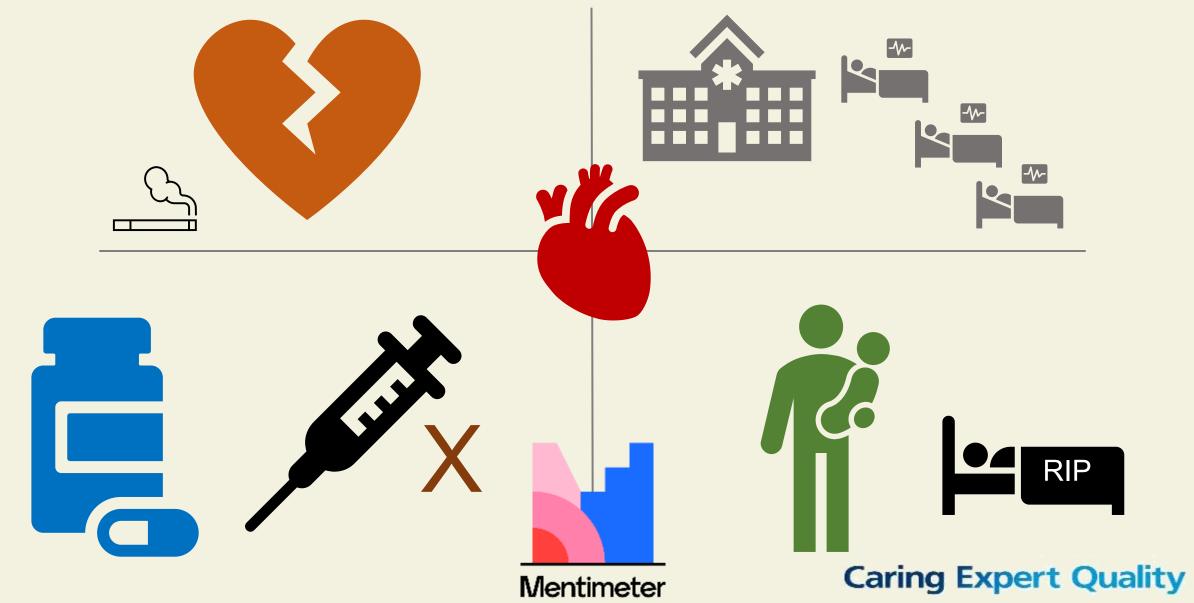
Offering & acceptance

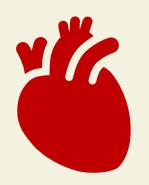
Post donation













# Culture

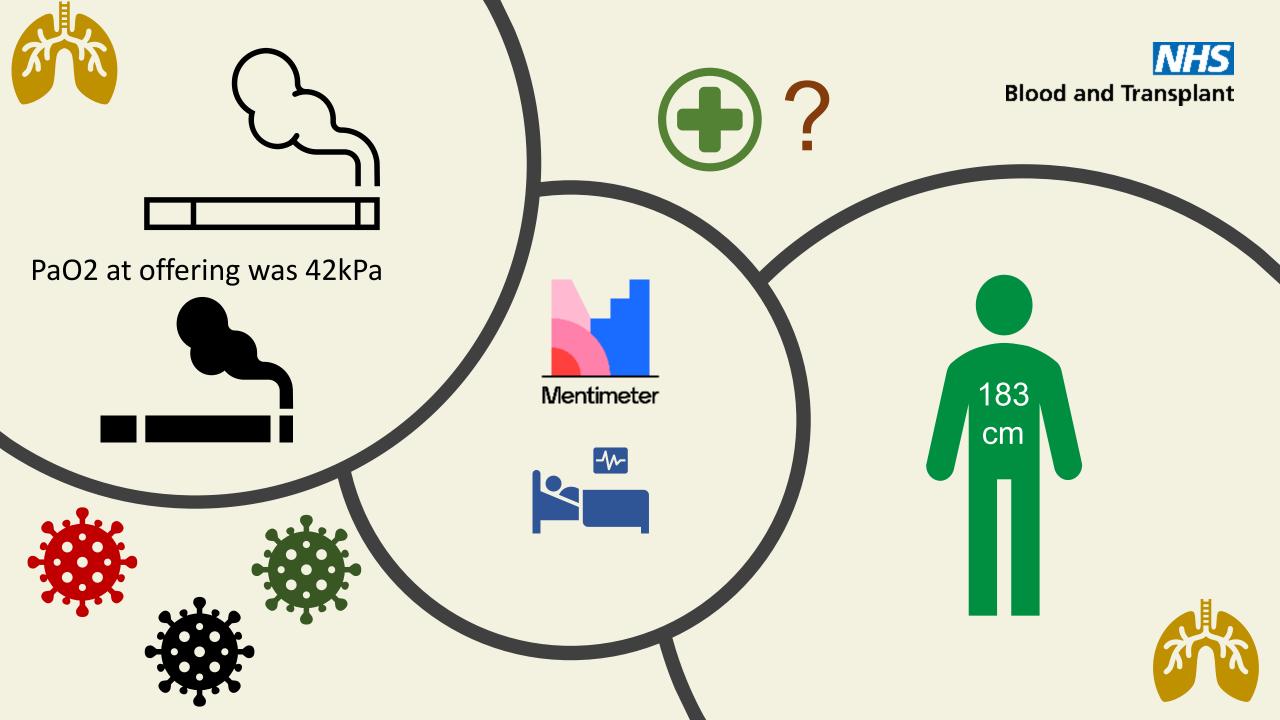






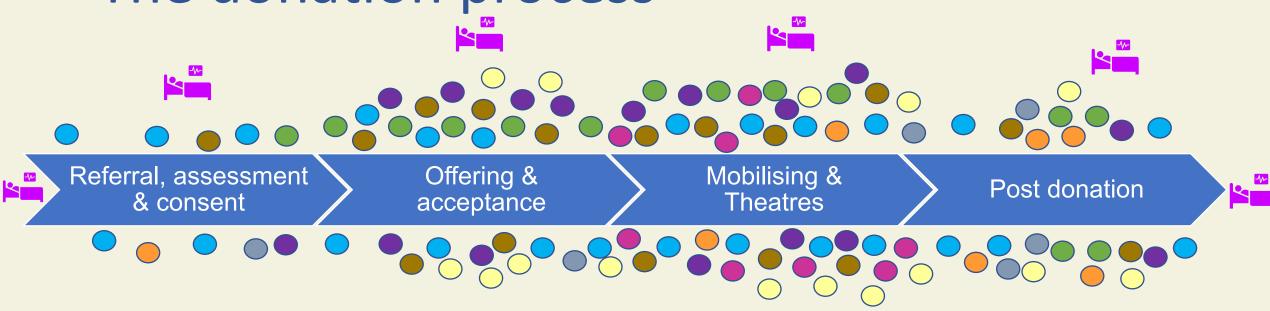
# Culture





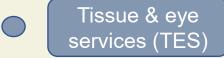


















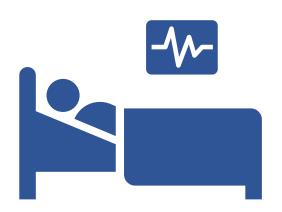














### Case study

48-year-old - Sub arachnoid haemorrhage

2014 – episode of renal colic – CT showed normal bladder and kidneys, and 3mm calculi in L kidney





Offering & acceptance







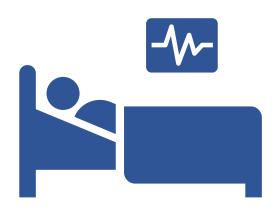




Blood group B +









### Case study

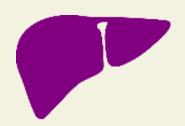
48-year-old - Sub arachnoid haemorrhage

Resuscitated - 28 minutes

Drinks a bottle of wine & 2 beers per night

BMI 26.2



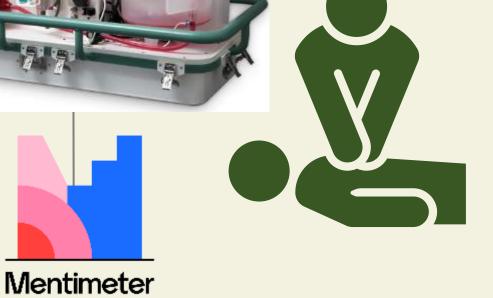




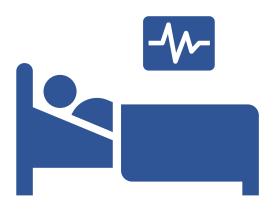














# Case study

48-year-old - Sub arachnoid haemorrhage

Past medical history
No diabetes – but family history of type I
& II diabetes

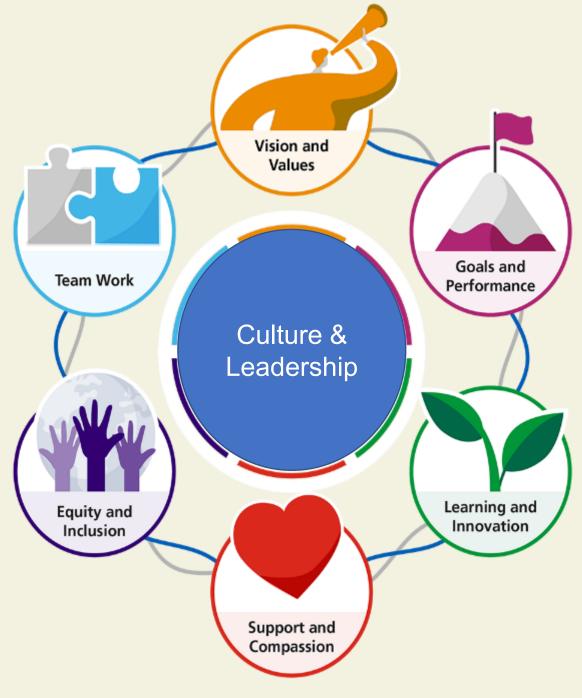
Donor type - DCD











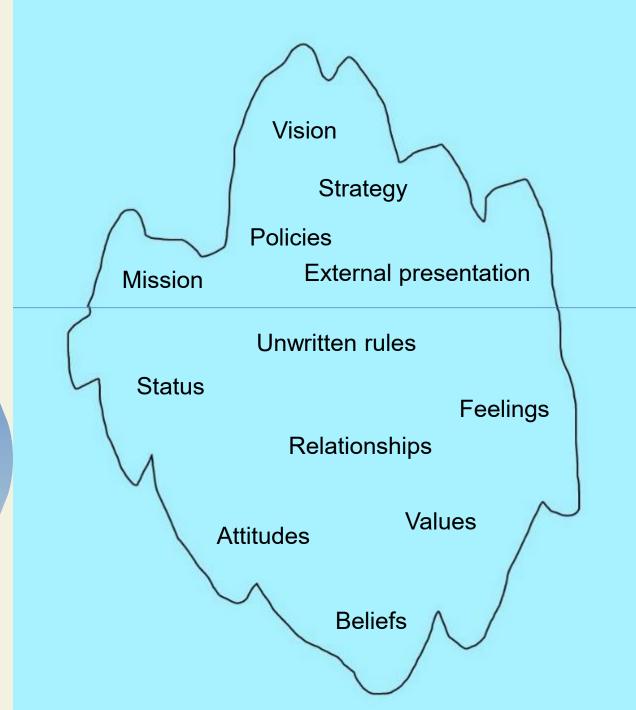




#### Culture - iceberg

### Culture begins with beliefs

and finds expression in behaviors.





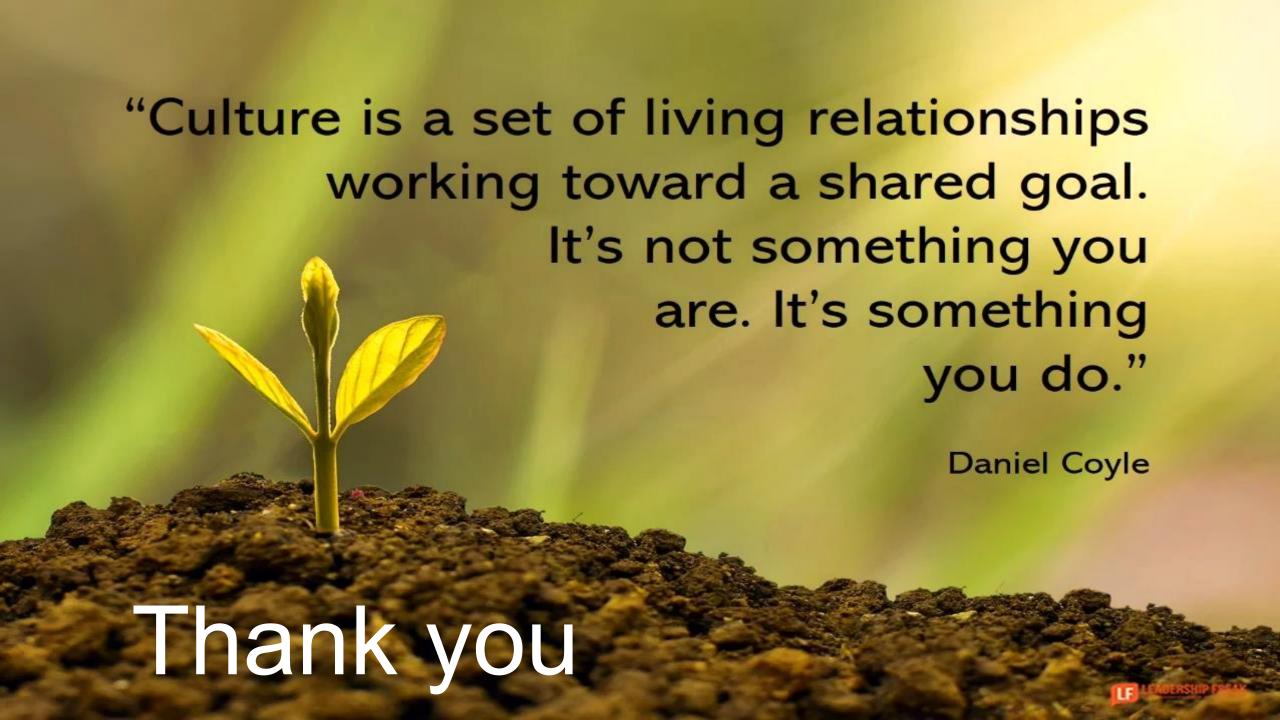
# Culture



Culture











#### **Lunch Break**

Sessions will resume promptly at 13.25.





# Afternoon Session: Welcome & Introduction

Diana Garcia Saez





# **Projects Showcase**

Diana Garcia Saez
Richard Baker
Sue Madden
Liz Armstrong
Laura Ellis-Morgan



## Clinical Leads for Organ Utilisation (CLUs)

Diana Garcia Saez

#### **Overall aims**

- 1. Maintain momentum and enthusiasm from CLU 1.0 and the National OU Conference May 2021
- 2. Complete local and national projects from CLU 1.0
- 3. Ideas and perspectives for new local and national projects
- 4. Further engagement with R-CLODS and Trust/Board OD(T)C
- 5. Provide basis for successful business case for long-term funding (CLU 3.0)

#### **Key changes from CLU 1.0**

#### Five Organ Lead CLU appointed by the Organ Utilisation Programme in August 2021



Aaron Ranasinghe, B'ham



Vicki Gerovasili, Harefield



Raj Prasad, Leeds



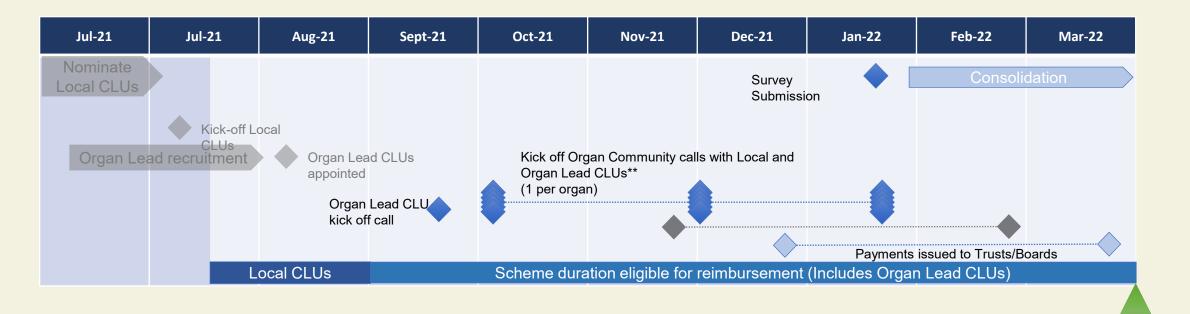
David van Dellen, Manchester



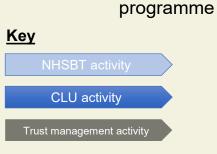
Nick Inston, B'ham



End of the



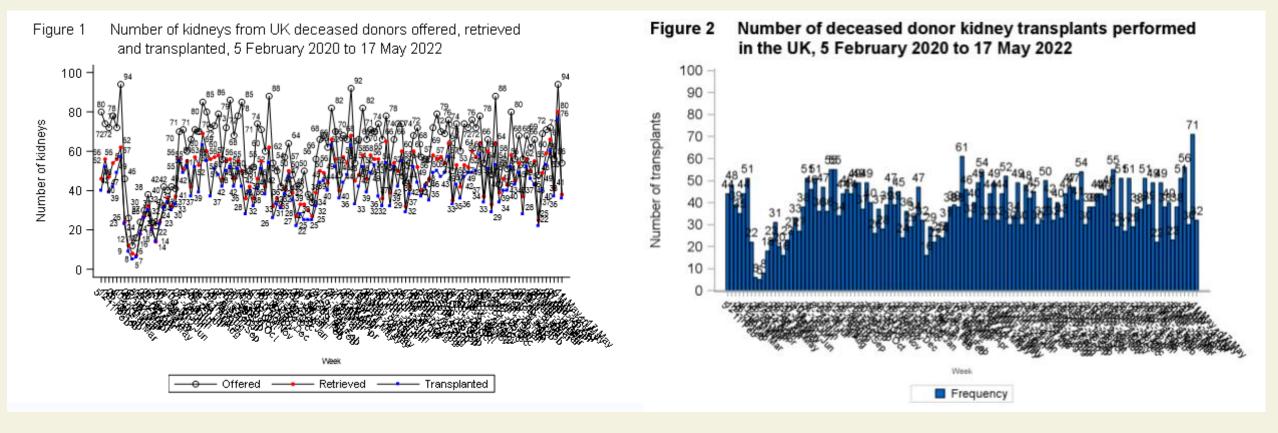
Funding to continue during Q1 2022-2023.



#### **Kidney CLU scheme**

Kidney units = 23



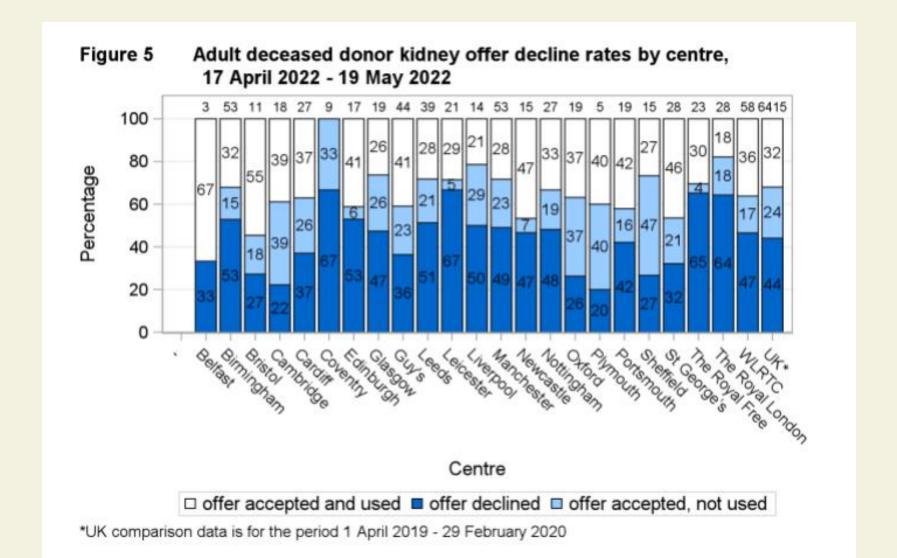


- From COVID to COVID recovery
- Offers back to where they were and transplant activity is up



#### **Kidney CLU scheme**



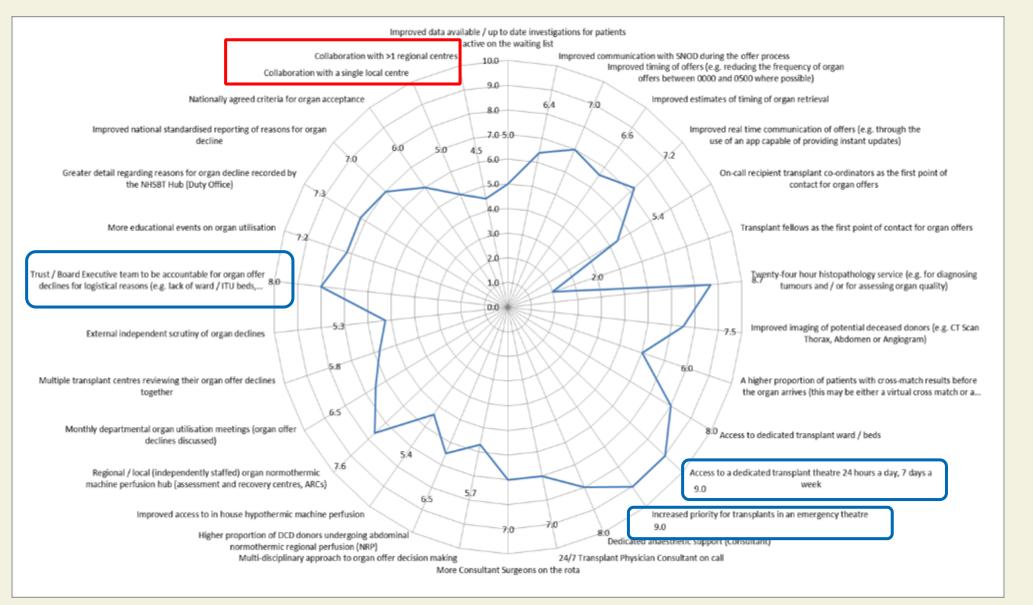


 But utilisation is still challenged



#### National survey on Interventions for OU







## Kidney CLU scheme



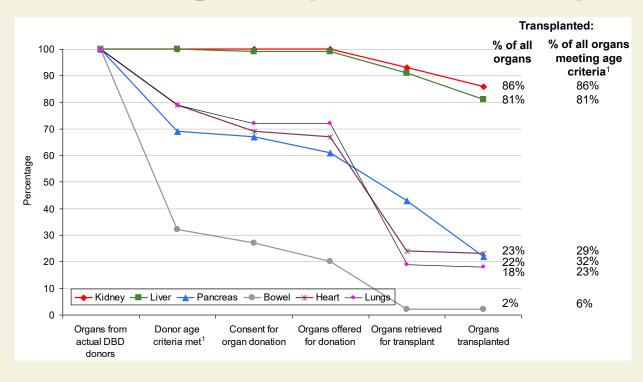
- Many issues appear to be local
- Common issues are facilities (Theatre/wards/anaesthetics/staffing)
- Accountability of Exec board suggests clinical teams trying but not being supported
- Collaboration not supported as the answer

OUG report is eagerly awaited

## **Pancreas CLU scheme**



## Challenges in pancreas transplantation



- Utilisation of organs..... (poor yield)
- Retrieval quality
- Physical assessment of organs
- Objective assessment of donor factors
- Prolonged time to asystole/DCD donors
- Islet utilisation



## Pancreas CLU scheme



#### Interventions to increase Pancreas utilisation

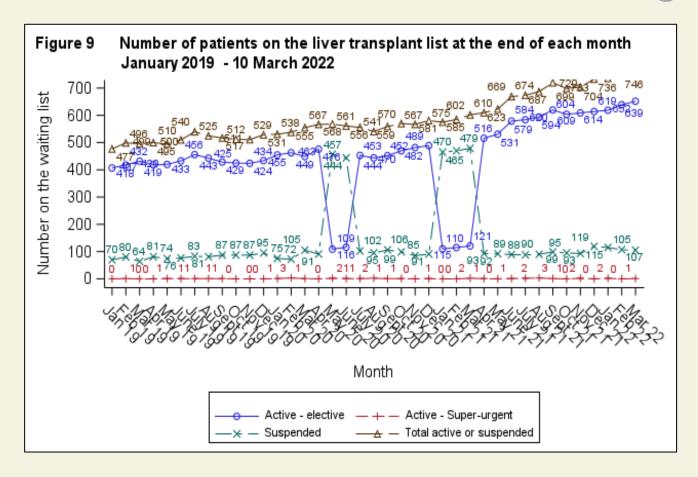
- Pancreas imaging to identify objective assessment criteria at retrieval
- Delphi assessment of organ offers planned Delphi to look at donor criteria
- Prolonged asystole for DCD donors assessing if we can wait longer than 30 mins for asystole in donors
- Work on improving quality of organ donors retrieval education
- Early identification of which donors suitable for islet and solid organ offers



## **Liver CLU scheme**

# NHS Blood and Transplant

## What are the main utilisation challenges



Marginal Grafts
New Indications

Variations
Within Centres
Between Centres
"Culture"

Surges in activity
Declines on Logistics

Allocation policies



## **Liver CLU scheme**



#### Interventions to increase Liver utilisation

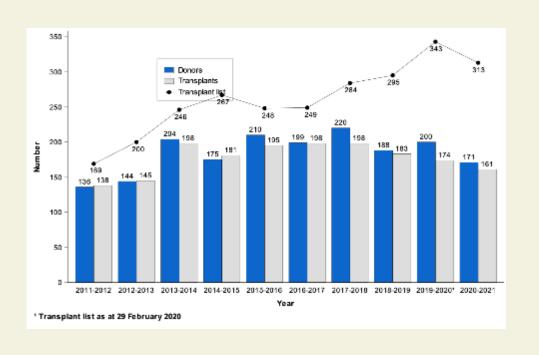
- Engagement Working Closely with LAG Joint document to OUG, Dashboards,
- Changing culture Liver Offer Review Schemes, Centre based utilisation groups
- Reducing Variation DCDs, right lobe grafts
- National audit on reasons for turning down organs
- Novel Technology NMP, HMP, NRP

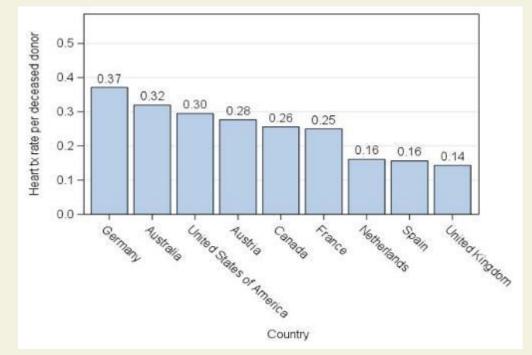


## **Heart CLU scheme**

# NHS Blood and Transplant

## What are the main utilisation challenges





- Organ optimisation
- Data transfer and availability
- Workforce planning/ Staff shortages



## **Heart CLU scheme**



#### Interventions to increase Heart utilisation

- Every centre now seems to have donor offer review meetings
- Double consultation with respect to organ turndown
- Centres engaging through the CLUs in National Surveys
- Local projects (Machine preservation, 'Heart champions for echocardiography', coronary angiography)
- Agreed Higher quality donor heart criteria
- Heart Offer Review schemes

   Go live date 23<sup>rd</sup> May



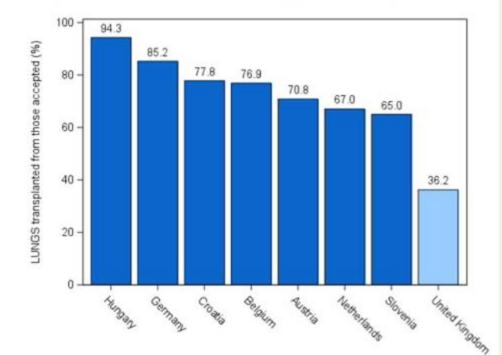
## Lung CLU scheme



#### What are the main utilisation challenges

Lungs transplanted from lungs accepted,

2020



- Workforce / Lung Tx Surgeons Job Plans
- Lack of Theatre / ITU staff to run 2 Tx in parallel
- Increasing complexity of retrievals / Retention and recruitment
- Increasing recipient complexity
- Joint Heart & Lung Tx Rota disadvantages Lung Tx
- COVID 19



All non-UK data from EuroTransplant - https://statistics.eurotransplant.org/, UK data from UK Transplant Registry, NHSB1

## Lung CLU scheme



#### Interventions to increase Lung utilisation

- Virtual donor optimisation pilot scheme Birmingham CLU
- "Blind the people" Collaborative acceptance between surgeons and physicians at Royal Papworth
- Streamlining the process of lung donor to recipient size matching Harefield CLU
- Reinforce donor audits at all centres
- Agreed Higher Lung Donor Quality Criteria
- Lung Offer Review schemes Go Live date 16<sup>th</sup> May 2022













**48** Tx physicians/ surgeons dedicated to improving OU Led by **5** Organ Lead CLUs and **2** National Clinical Leads

**31 local** CLU projects and **3 national** projects in progress

National survey on
Interventions for Organ
Utilisation
145 responses from 27 units

Offer review schemes recommenced for Kidney & Pancreas and initiated for Liver, Heart and Lung Led by Organ Lead CLUs

99





17 Organ Community Calls4 Organ lead CLU calls

#### 1 all CLU call

Information sharing between CT and Abdo organ groups

- Transplant Physicians group
- Trainees in CLU scheme
- Metrics

Presentation to NHSBT Chief
Executive by Organ Lead
CLUs showcasing the CLU
scheme

CLUs have developed and implemented **local action plans** for improving OU

**Self-appraisals** submitted to Organ Lead CLUs

## **CLU 2.0 Evaluation Survey**



28 responses were received from CLUs at 18 transplant units in March - April 2021

Kidney (14), Liver (5), Pancreas (5), Heart (6), Lung (6)

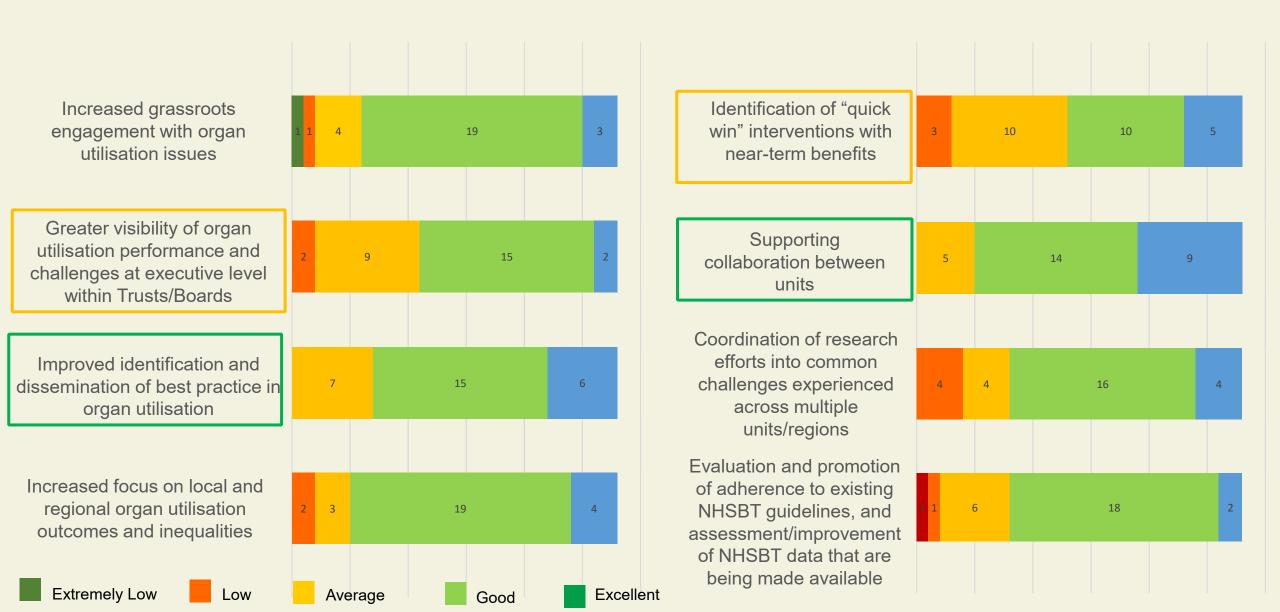
Key Barriers				
Access to theatres and ICU beds	<ul><li>Limited access to theatre (out-of-hours)</li><li>Competition with conventional waiting list</li></ul>			
Staffing	<ul><li>No transplant trainees or consistent junior support</li><li>Inadequate surgical and coordinator staffing</li></ul>			
Risk taking and culture	Small units, more conservative  The unit's risk taking behaviour variation in assessment of donors			
Technology	<ul> <li>Very limited access to NRP / No organ perfusion service</li> <li>Access to good quality echocardiogram</li> </ul>			

79%

respondents felt
more
empowered
since becoming
a CLU to
address some of
these barriers

# Evaluate the impact of the scheme in relation to the expected benefits





## **Acknowledgments**



- o Aaron Ranasinghe, David van Dellen, Nick Inston, Raj Prasad and Vicky Gerovasili
- Chris Callaghan
- Claire Williment
- o **OUP:** Jessica Jones, Tom Nicholson, Andrea Pereira, Celine Haines, Jonathan Green, Hugh Laverty, Joel McGrath, Helen McManus, Agimol Pradeep
- o NHSBT Stats team: Sue Madden, Sally Rushton, Roderick Jaques
- Dale Gardiner
- Advisory Group chairs

## **Acknowledgments**



- Heart CLU: Asif Shah, Harikirshna Doshi , Jacob Simmonds, Fernando Riesgo, Marius Berman, Vipin Mehta
- Lung CLU: Arun R Nair, Jacob Simmonds,, Amit Adlakha, Espeed Khoshbin, Pradeep Kaul, Vipin Mehta
- **Kidney CLU:** Neil Russell, Tim Brown, Khalid Sharif, Liam McCarthy, Sanjay Sinha, John O'Callaghan, Somaiah Aroori, Aimen Amer, Nicholas Barnett, Rhana Zakri, Zia Moinuddin, Ravi Pararajasingam, Rupesh Sutaria, Adnan Sharif, Andrew Jackson, Hemant Sharma, Sanjay Mehra, Anusha Edwards, Abbas Ghanzanfar, Stuart Falconer, Reza Motallebzadeh, Ismail Mohamed, Laszlo Szabo, Rowland Storey.
- Liver CLU: Andrew Butler, Liam McCarthy, Khalid Sharif, Colin Wilson, Miriam Cortes-Cerisuelo, Thamara Perera, Shahid Farid, David Nasralla
- Pancreas CLU: Gavin Pettigrew, Sanjay Sinha, Aimen Amer, Nick Barnett, Rhana Zakri, Zia Moinuddin, Rowland Storey



## **Assessment & Recovery Centres (ARCs)**

Dr Richard Baker

AMD Clinical Governance Renal Consultant, St. James's Hospital Leeds

#### **Organ Assessment and Recovery Centres**



Why should we implement ARCs now?

The **supply of marginal organs is increasing**, and evidence suggests that machine perfusion can help to improve the post-transplant outcomes of marginal organs. Organ transplant waiting list has increased due to COVID-19 and ARCs provide the opportunity to **increase the number of transplants** per year.



**UK heart utilisation is low**, just 29% of offered hearts are transplanted. Current technology (Transmedics OCS) machine allows for hearts to be **perfused for up to 12 hours at the upper limit.** 



**UK lung utilisation is the lowest of all solid organs** - just 12% of offered DCD lungs and 22% of DBD are transplanted. The Toronto ORC model has demonstrated that marginal lung Assessment, Repair and Preservation is feasible with current technologies and resulted in a 100% increase in lung transplant activity since launched.



**Utilisation of offered DCD livers is low**, at just 29%. 6 transplant centres across the UK have begun using ESMP across the UK. There is strong evidence in the literature to suggest that **liver function can be repaired using ESMP**.



The supply and demand for Kidneys is the highest of all organ types in the UK. Medical management costs for the Kidney are very high, thus the opportunity cost of not transplanting a kidney is high. Kidney dialysis costs c.£30,000 per year.

#### **ARC Drivers**

## 24hrs

Up to 24 hours of ex-situ organ preservation time for certain organs

48%

Of offered primary organ types organs are utilised (DBD 53%, DCD 40%)



Additional transplants per year by year 5

£1.4b

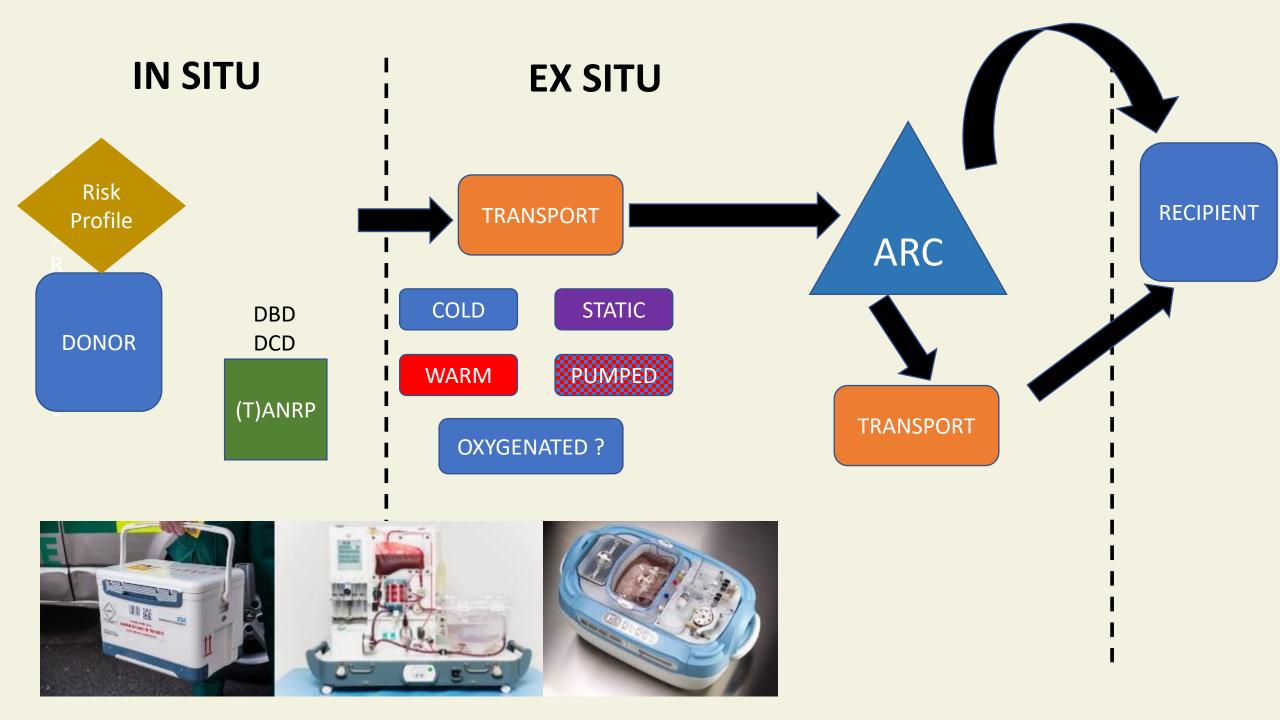
In QALY benefit to the UK economy over 10 years

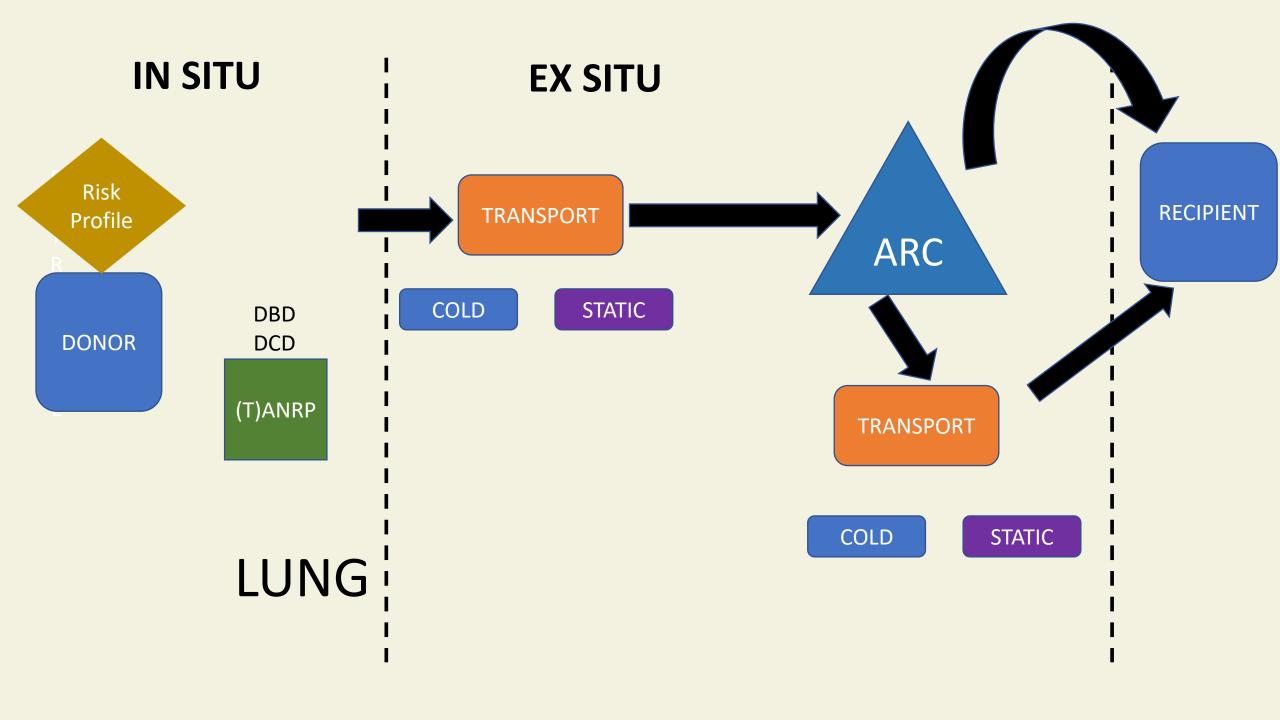


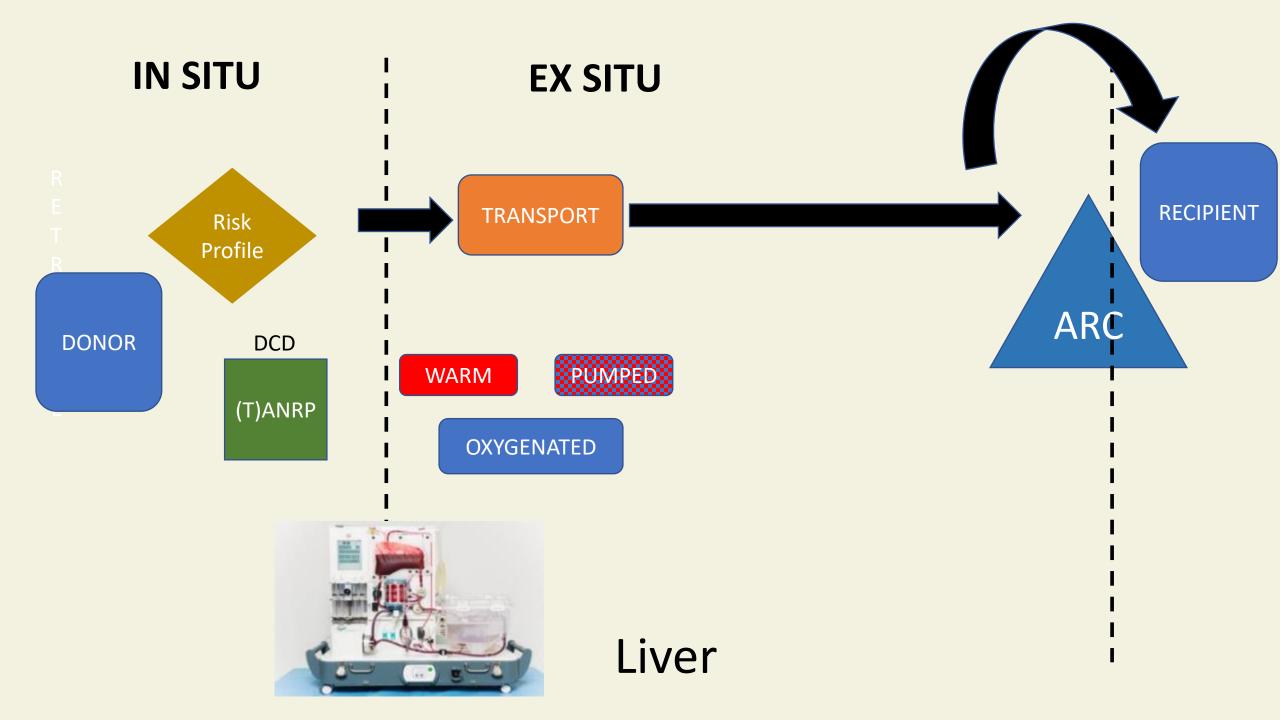


## ISSUES FOR ARCs

- In Situ perfusion (ANRP)?
- Criteria for intervention
- Which model?
- Offering
- Transport
- Specification and protocol for intervention
- Viability assessment
- HTA
- Research







DEVICE	CIRCULATION	OXYGEN	TEMPERATURE
Washina Perfusion Made Simple.  VitaSmart  HOPE One System for Liver and Kidney Simple Setup and Easy-to-Learn Coet Effective Machine Perfusion  ESOT 2021	Perfusion	Yes	
	Perfusion	Yes	
TransMedics	Perfusion	Yes	



#### NHS Blood and Transplant



## ISSUES FOR ARCs

- In Situ perfusion?
- Criteria for intervention
- Which model?
- Offering
- Transport
- Specification and protocol for intervention
- Viability assessment
- Tactical Data Solution Perfusion and short term outcome
- HTA
- Research



## **Risk Communication Tools**

Sue Madden

## **Risk Communication Tools**



- Developed by NHSBT Statistics and Clinical Research team in collaboration with the Winton Centre for Risk and Evidence Communication, at the University of Cambridge
- Designed to help clinicians communicate risks and benefits of transplantation to their patients in an easy to understand format
- Help to visualise possible outcomes for patients from the point of listing or the point of transplant for deceased donor transplantation
- Provide useful information to clinicians when consenting patients
- https://www.odt.nhs.uk/









- Read our coronavirus advice to transplant patients
- <u>Frequently asked questions</u> about transplants during coronavirus

0



#### Communicating risk to potential recipients

NHS Blood and Transplant, in collaboration with the Winton Centre, have developed online tools to help clinicians communicate the risks and benefits of transplantation to patients.



#### Commonwealth Tribute to Life project

NHS Blood and Transplant is seeking support from Commonwealth nations for a memorandum of understanding on organ donation and transplantation which reflects our shared values.

Access the tools

>> Read the ambition









#### Access the tools

## Lung Risk Communication Tool

To help decision making when considering a lung transplant.

>> Access the tool

#### Kidney Risk Communication Tool

To help decision making when considering a kidney transplant.

>> Access the tool

#### Ron Stratton Liver Risk Communication Tool

To help decision making when considering a liver transplant.

>> Access the tool

#### Heart Risk Communication Tool

To help decision making when considering a heart transplant.

>> Access the tool

#### Pancreas Risk Communication Tool

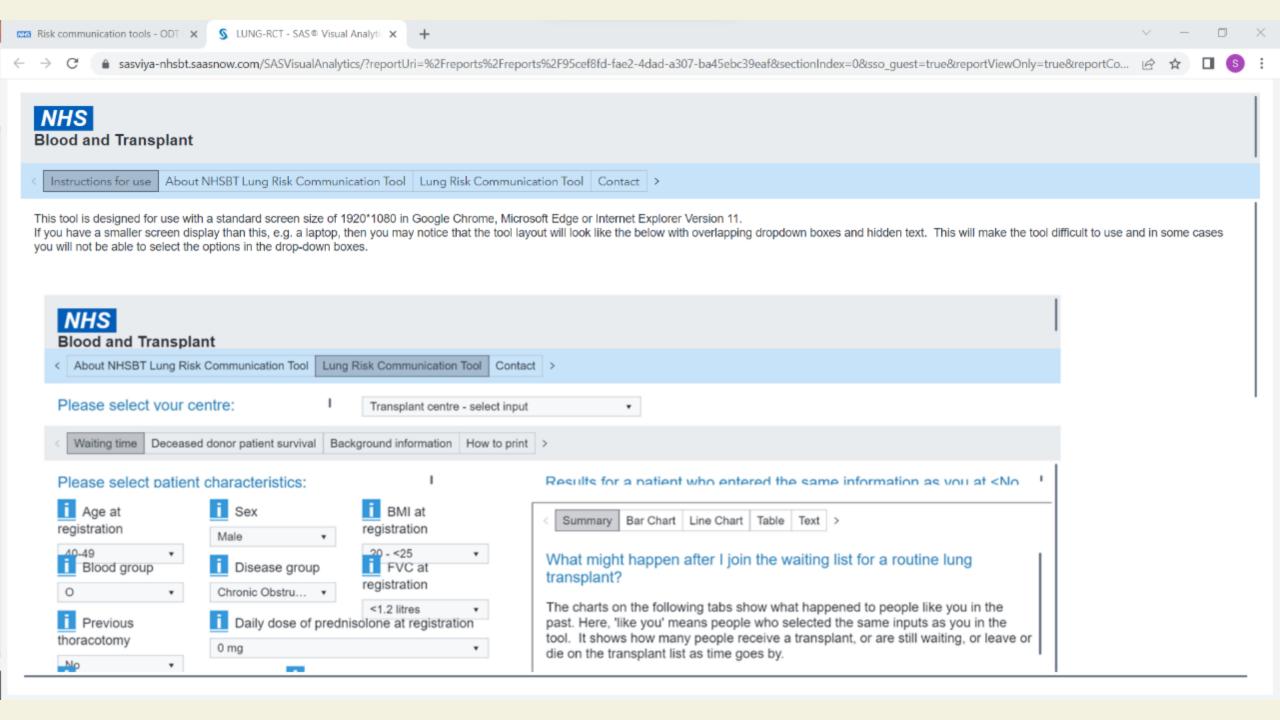
To help decision making when considering a pancreas transplant.

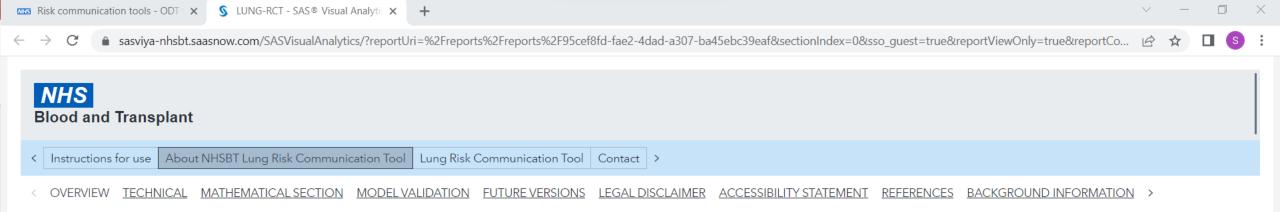
» Access the tool

#### Instructions for use

These tools are designed for use with a standard screen size of 1920\*1080 in Google Chrome, Microsoft Edge or Internet Explorer Version 11.

If you have a smaller screen display than this, e.g., a laptop, then you may notice that the tool layout will include overlapping drop-down boxes and hidden text.





#### What is NHSBT Lung Risk Communication Tool?

The NHSBT Lung Risk Communication Tool (Lung-RCT) is an online personalised calculator that can help doctors and nurses communicate risk and benefit about transplantation to patients, and can help patients more easily understand the numbers and statistics presented to them in clinic. It helps visualise possible outcomes for patients from the point of listing or point of transplant for deceased donor lung transplantation.

#### What does Lung-RCT do?

Lung-RCT is a communication tool designed to aid discussions between patients and clinicians. It will help clinicians and patients to visualise outcomes based on data for patients with similar characteristics in the past. The calculator asks for some details about the patient and presents results in the form of graphs and tables and charts based on those details.

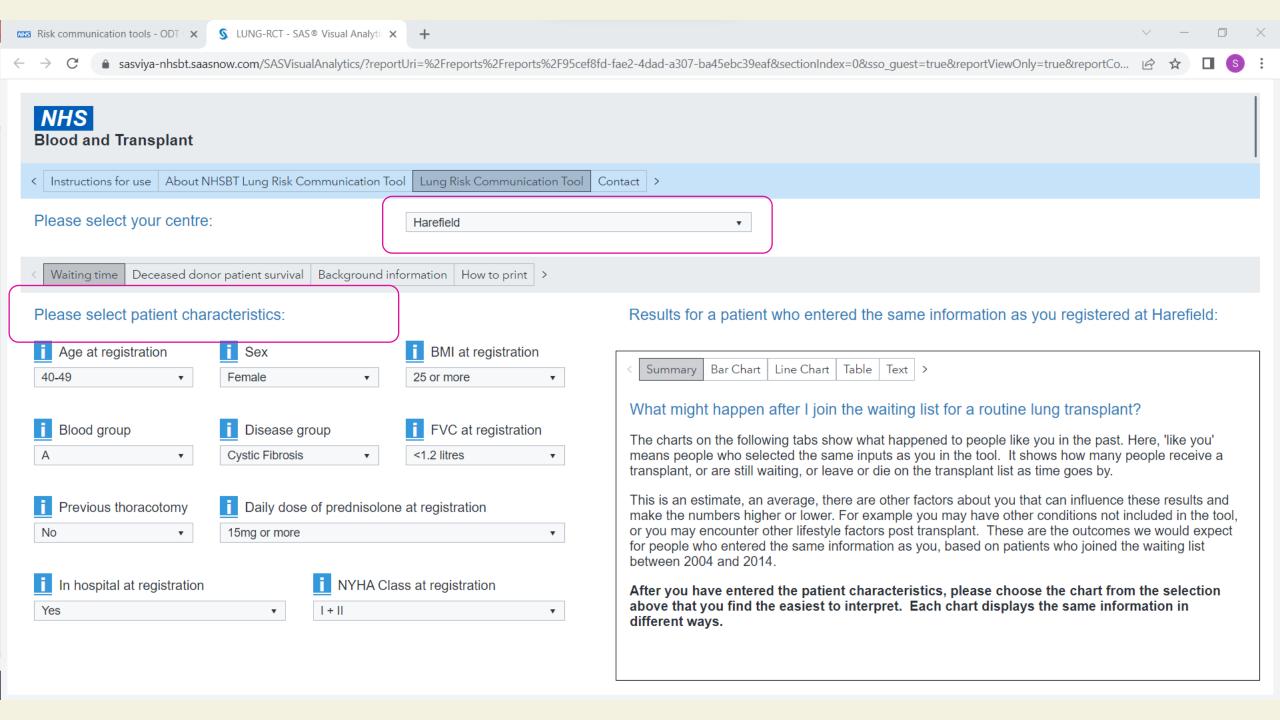
Currently the results presented for lung patients are: waiting time (from the point of listing) and chance of getting a transplant whilst acknowledging the risk of death on the list or removal from the list, also survival of the individual after receiving a transplant. To create the results presented, data about patients in the past were used to build statistical models. When you enter details into Lung-RCT, the calculator looks at these models and extracts results based on what happened to people "like this".

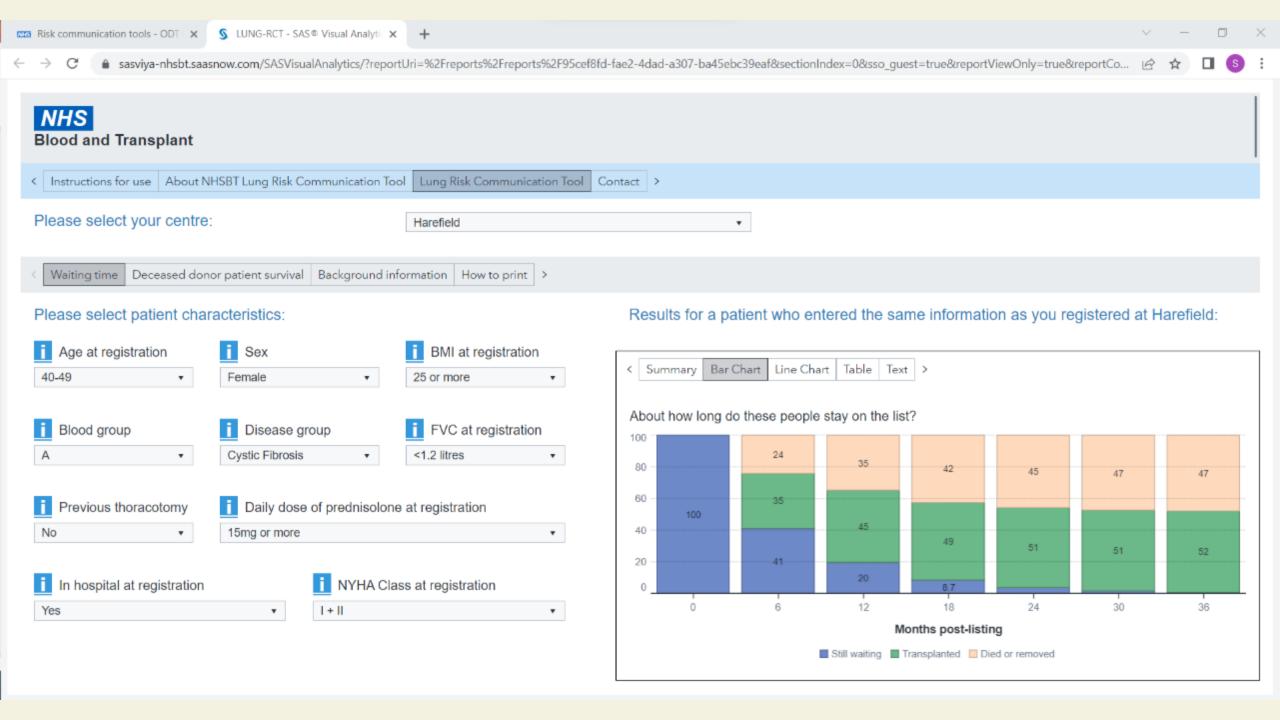
#### Who is Lung-RCT for?

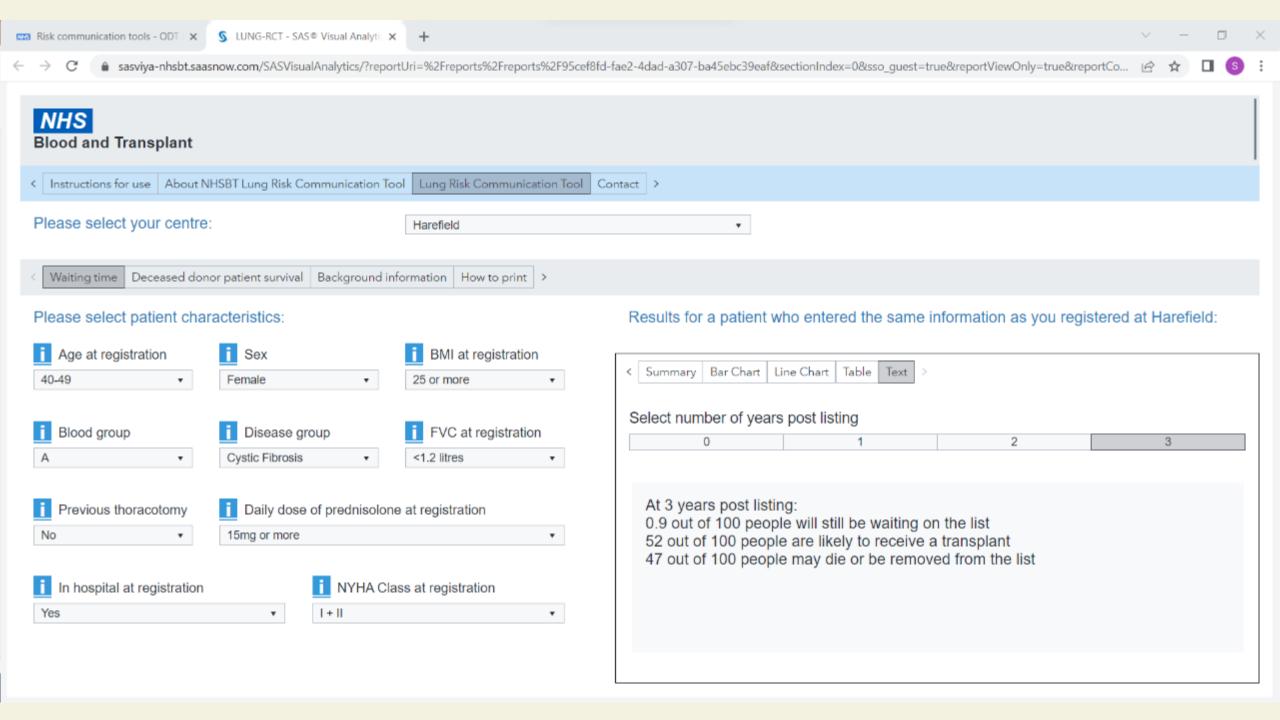
The Lung-RCT has been designed to be used by clinicians with patients and their families. It is a communication tool and should not be used by itself to make decisions.

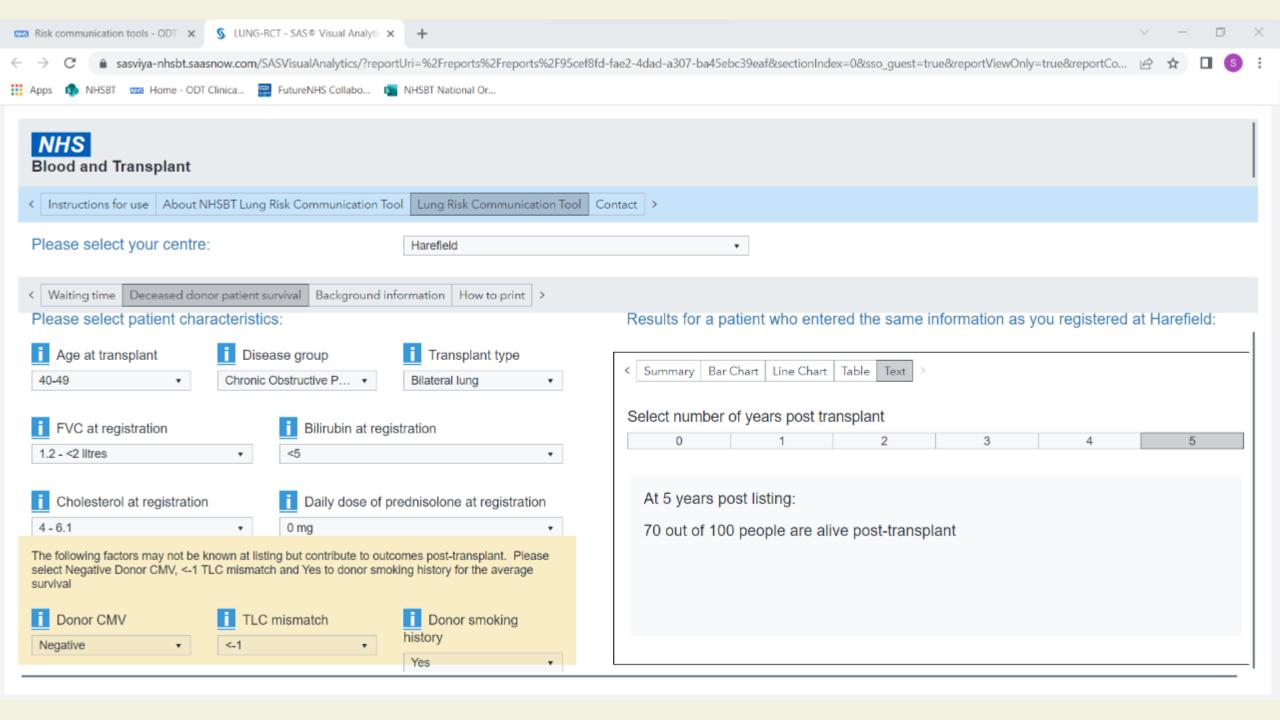
#### Patients should use Lung-RCT in consultation with a medical professional.

Only adult (aged ≥16 years) patients have been used to the develop the tool; it is not suitable for paediatric patients due to the small number of patients involved which would not generate robust models. Patients who were not eligible for National Health Service (NHS) treatment and adult patients registered (for clinical reasons) on a paediatric waiting list were not included. Patients registered on another organ transplant list (eg, kidney list) either before, during or after their lung registration were also not included. The results from the Lung-RCT will therefore not be suitable for patients from outside the UK or for those patients who fall outside these inclusion criteria.











## **Patient Information Website**

Liz Armstrong

#### Projects:

Patient information website

## NHSBT Second National Organ Utilisation Conference

# Welcome to the patient information area for organ transplantation Here you'll find guidance and advice to help you decide if a transplant is the right treatment for you

#### Kidney

É





The kidney is the most commonly transplanted organ.

There are three types of lung transplant: single, double or heart-lung transplants.

>> Learn about kidney transplants

>> Learn about lung transplants

#### Heart



Liver



The first heart transplant programme in the UK began in 1979.

» Learn about heart transplants

Survival rates for liver transplants are higher than ever.

>> Learn about liver transplants

#### Pancreas



Small bowel



A pancreas transplant lets people with diabetes be free from insulin injections.

>> Learn about pancreas transplants

Small bowel transplants are used to treat irreversible intestinal failure.

>> Learn about small bowel transplants





# Communication of Risk and Consent

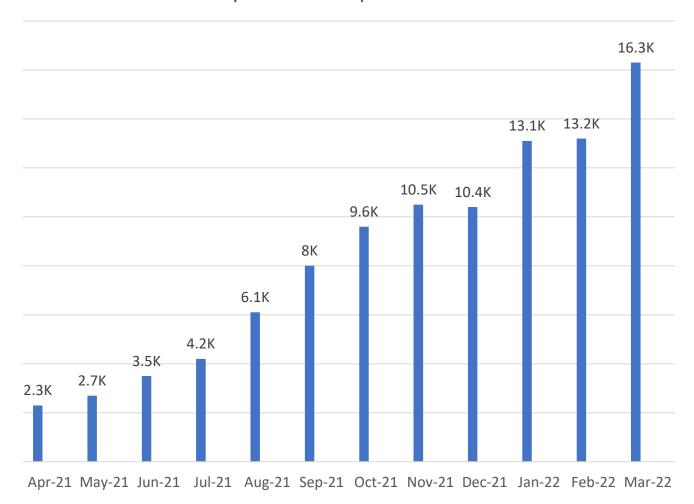
https://www.nhsbt.nhs.uk/organtransplantation/





# Patient information website - dashboard

### Webs visits per month April 2021- March 2022



# Location of users

	Town/City	Web visits ▼	% of web visits	
1.	London	14,496	16.0%	
2.	Birmingham	2,530	2.8%	
3.	Glasgow	1,691	1.9%	
4.	Manchester	1,544	1.7%	
5.	Croydon	1,324	1.5%	
6.	Leeds	1,294	1.4%	
7.	Bristol	1,163	1.3%	
8.	Liverpool	1,083	1.2%	
9.	Edinburgh	951	1.1%	
10.	Cambridge	790	0.9%	
11.	Cardiff	733	0.8%	
12.	Newcastle upon Tyne	731	0.8%	
13.	Sheffield	694	0.8%	
14.	Nottingham	629	0.7%	
15.	Dublin	600	0.7%	
16.	Sydney	553	0.6%	
17.	Coventry	494	0.5%	
18.	Belfast	455	0.5%	
19.	New York	440	0.5%	
20.	Oxford	442	0.5%	
21.	Norwich 365		0.4%	
22.	Plymouth 352		0.4%	
23.	Southampton	341	0.4%	
24	Reading Grand total	99,481	100.0%	

COUNTRY OF WEB VISIT					
	Country	Web visits ▼	% of web visits		
1.	United Kingdom	68,209	68.3%		
2.	United States	11,683	11.7%		
3.	India	3,140	3.1%		
4.	Australia	1,454	1.5%		
5.	Canada	1,336	1.3%		
6.	ireland	885	0.9%		
7.	Pakistan	838	0.8%		
8.	Philippines	565	0.6%		
9.	Hong Kong	459	0.5%		
10.	Germany	456	0.5%		
11.	South Africa	447	0.4%		
12.	United Arab Emirates	365	0.4%		
13.	Netherlands 364		0.4%		
14.	Saudi Arabia 360		0.4%		
15.	Malaysia 348		0.3%		
16.	Egypt	341	0.3%		
17.	Singapore	335	0.3%		
18.	South Korea 297 0.		0.3%		
19.	New Zealand 296 0.		0.3%		
20.	Spain	Spain 296 0.3%			
21.	France 294 0.37		0.3%		
22.	Itely	272	0.3%		
23.	indonesia	264 0.3%			
24			0.29.		
	Grand total	99,916	100.0%		

# Thanks to...

- Chris Callaghan
- Kam Rai
- Clare Giltrow
- Organ specific working group chairs and all members
- Digital, Date and Technology Services & Donor Experience Teams
- OTDT Clinical Team



# **Digital Infrastructure for Utilisation**

Laura Ellis-Morgan

### Digital Infrastructure for Organ Utilisation



diuprojectmailbox@nhsbt.nhs.uk

The Digital Infrastructure for Organ Utilisation (DIU) project will develop IT infrastructure to underpin:

- The ARCs (Assessment & Recovery Centres) initiative
- Robust donor and organ assessment
- Secure media sharing

### **Project Phase 1**

- EOS Replacement Allowing external users to easily search for and view donor data
- Secure Media Sharing- Allowing external users to safely view media related to a donor (image, video etc.)

### **Transition State 1 Drivers:**

### **Data Security**



Existing & impending cyber security risks with current EOS platform

Existing risk of compromised patient confidentiality/safety through the lack of an auditable, secured image-sharing system

### **User Experience**



incidents with the current EOS platform

#### **Project Phase 2 [Indicative]**

- Digital Accept/Decline (of offers)- Digital assignment of an organ offer to a centre. Digital acceptance or decline of an organ by a centre
- Machine Perfusion Data Collection and Storage- Management of machine perfusion/ARC data in relation to a donor record
- HTA-A Form Digitisation- Digitisation of the process managing HTA-A form data
- Body Map Digitisation Digitisation of donor body-map data

#### **Project Phase 3 [Indicative]**

- Digital Workflow System- Provision of key retrieval timings to permitted users via a digital platform
- DCD Observations- Provision of DCD observation data to permitted users via a digital platform
- Transplant Offer Management (TOM)- Assessment of the existing TOM application for functionality which can be implemented on the EOS Replacement. Provision of external facing APIs for Trust system integration to support retrieval of donor and offer data from NHSBT for presentation in Trust systems.



Existing risk of "near misses" and critical

Poor user experience on the existing EOS platform, originally built in 2007

### **DIU Strategic Goals:**



Deliver an electronic offering system that supports sharing of data between NHSBT and its partners and helps to increase organ utilisation



#### Modernise our operations

- Invest in core IT platforms by replacing the aging and unsupported EOS platform
- Replacement of manual and paper-based processes by digitising the HTA-A form and body map
- ▶ Drive continuous performance improvement using data by enabling the sharing of key workflow timings and DCD observation data with 3rd parties

#### **Drive Innovation**

- ► Integrate NHSBT systems with the perfusion machines to support the implementation of Assessment and Recovery Centre (if this requirement is brought into scope in future transition states)
- ▶ Improving patient outcomes by improving organ utilisation and efficacy (through provision of efficient decision-aiding platforms)





# Organ Utilisation Group: Overview

**Professor Steve Powis** 

### Remit



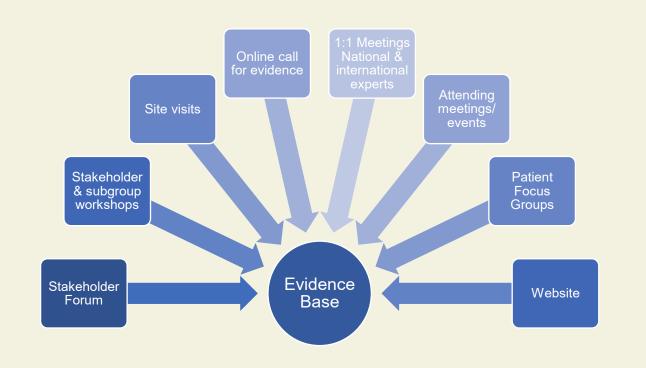
- Established by the Department of Health and Social Care to make recommendations on how to:
  - Deliver improvements in the number of organs that are accepted and successfully transplanted for adult and paediatric patients
  - Optimise the use of the existing skilled workforce, investment and infrastructure
  - Provide equity of access and patient outcomes
  - Reduce unwarranted variations in practice
  - Support innovation
- Remit in England only, but acknowledge patients cross UK borders and any recommendations for change may impact on other UK countries. Recommendations shared with UK Ministers
- Transplantation of organs from living and deceased donors
- Paediatric and adult services
- Task-and-finish group will be disbanded after recommendations are provided

# **Approach & Engagement**



- Multi-disciplinary representation on the Organ Utilisation Group
- Subgroups to bring in additional expertise and insight (membership not limited to England)
- 97 responses to online call for evidence
- 248 responses to patient survey
- 4 patient focus groups
- 58 delegates at stakeholder workshop
- Meetings with 6 countries
- 10 site visits
- National and international evidence base review
- Stakeholder Forum to share information, seek views/ comments on direction of travel and drafts.

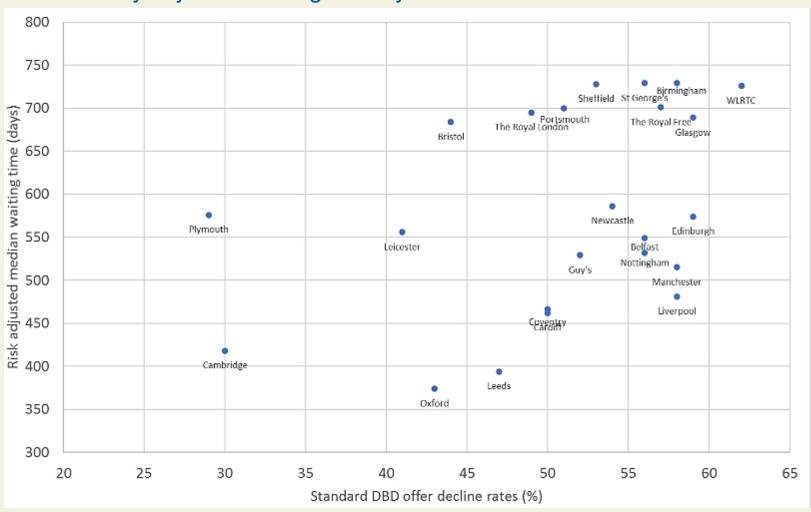
OUG Subgroups				
Standards	Commissioning			
Workforce	Systems Architecture & Data Handling			



# New Analyses - Decline rate impact on waiting list



Adult kidney adjusted waiting time by DBD standard offer decline rates

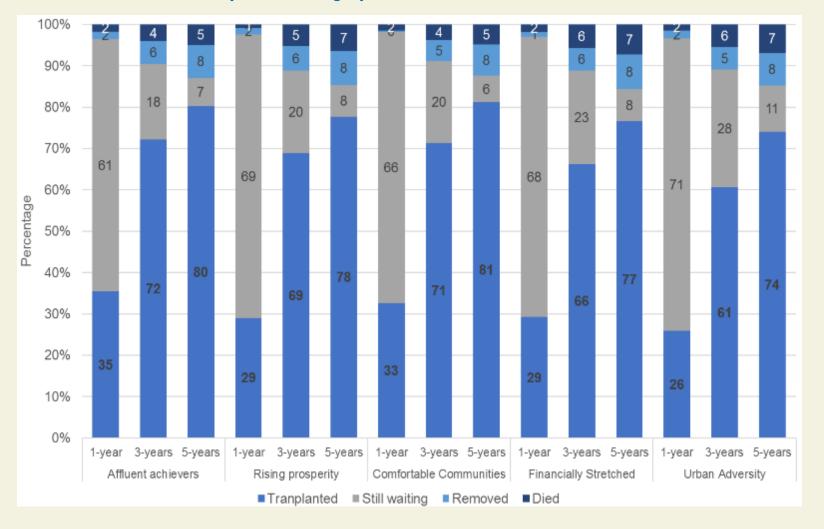


Using Pearson's correlation coefficient, it was found that a centre's standard DBD kidney offer decline rate and risk-adjusted waiting time for kidney transplantation have a significantly linear relationship (r=0.4, p=0.05).

# **New Analyses – Acorn impact on waiting times**



Post-registration outcome for new adult kidney only registrations made in the UK, 1 April 2015 – 31 March 2016, by Acorn category

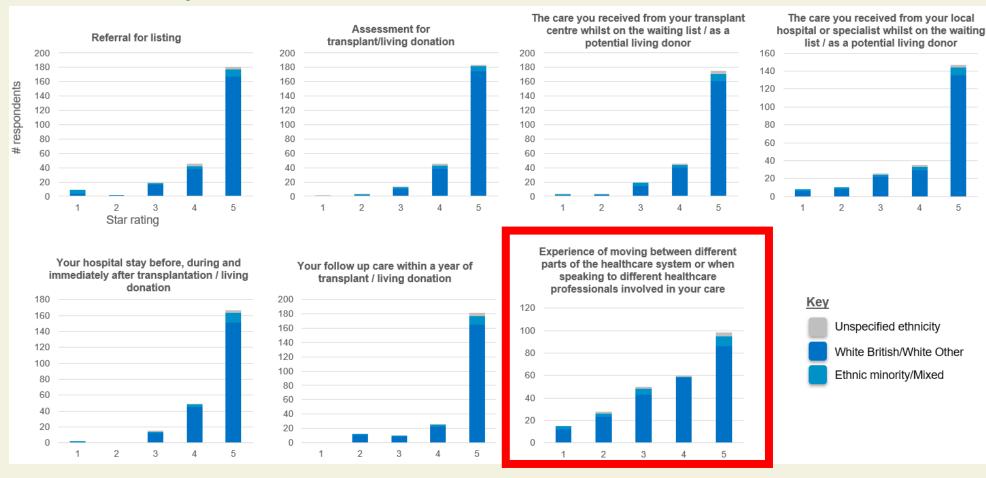


- UK Transplant Registry postcodes – 98% accurate.
- Proportion of patients transplanted/ waiting/ removed one, three and five years after joining the list by acorn category.
- 35% of patients in the affluent achiever's category are transplanted within 1 year compared to 26% in the urban adversity category
- 80% of affluent achievers have received a transplant compared to 74% of urban adversity after 5 years.

# New Analyses – Patient survey & Focus Groups 'Mind the Gap'



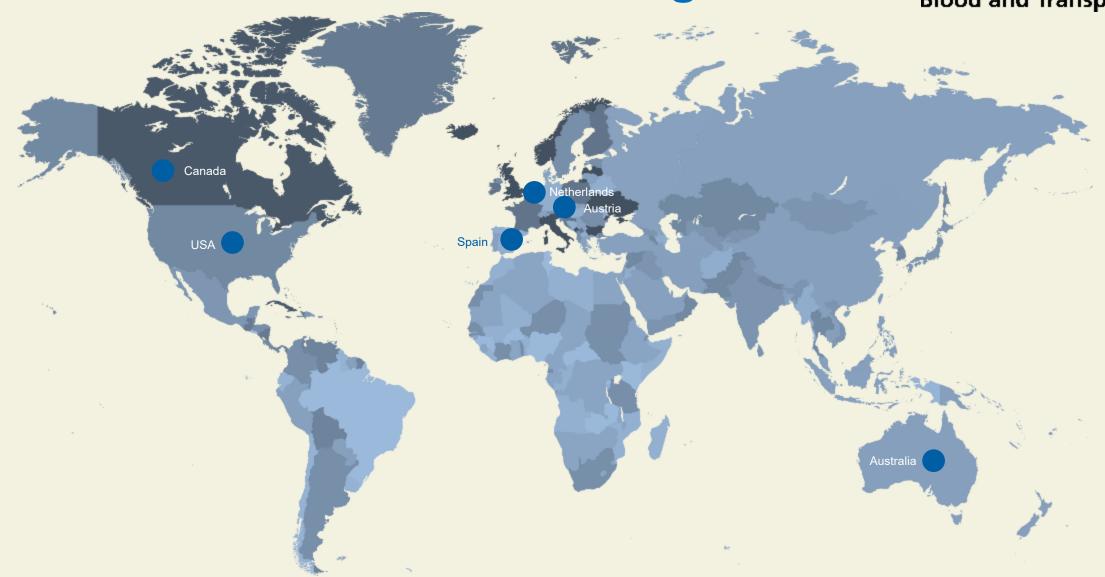
### **OUG Patient Survey**



Keep watching - Fiona Loud will cover in more detail in next presentation

# **Evidence - International Meetings**





# **Similarities & Cautionary Tales**



### **Similarities**

- Maximising utilisation potential a shared issue
- Risk appetite and centre variation not possible to eliminate, but should seek to reduce the amplitude
- Utilisation rates driven by local enthusiasts
- Few instances of any national level oversight of the whole care pathway
- Workforce burnout and recruitment/ retention issues especially post pandemic

### **Cautionary Tales**

- 70% acceptance rates in EuroTransplant for hearts, but no quality control on outcomes
- Reporting measures that focus on chastising poor outcomes increases risk averse behaviour
- Large number of centres means increase in transplant, competition etc, but also means that some centres have very low transplant rates due to small waiting lists

### **Lessons Learned**



### Resourcing:

Agreements, preferably formal contracts, minimise organ declines

### External scrutiny:

- for severely underperforming Units, with Trust management involved
- Benchmarking and outcome measures are key to driving improvements

### Support:

- Always have 2<sup>nd</sup> opinion regarding an organ decline
- Don't disincentivise those who accept higher risk donors. Challenge those who don't accept standard criteria donors
- Nationally trusted source of advice for complex cases or concerns regarding risk/ safety issues
- Support those who take risks
- Annual training programmes, informed by evaluation of any common issues

### Incentivise:

- focus on monitoring adherence to best practice, rather than only criticising best practice
- Set measures that incentivise
- Have metrics that are patient-focussed supports patient involvement and incentivises Units
- If a centre accepts a high-risk organ then they don't go to the bottom of the list for the next organ

# NHS Blood and Transplant

### **Innovation**

- Developing predictive analytics to address risk aversion and prevent inappropriate offers
- Use GPS tracking of organs in transit, to support resource planning and inform future improvements
- Looking to standardise biopsy imaging
- Establishing a new matching system to help those with longer wait and highly sensitised patients, with built in simulation to explore likely outcome.
- All dialysis patients are required to be considered for transplant within 12 months.
- Undertaking a mapping exercise to look at donation and transplantation across the country, to identify problems and solutions
- 70% of DCD donors have NRP. Looking to establish DCD Hearts and TANRP
- Provides a mobile ECMO team for DCD procedures
- Focussing on shared decision making with patients
- Using advanced tissue typing to ensure organ goes to the right patient, with machine perfusion to ensure it is in the best possible state

# **Summary of feedback – Key Challenges**



### **Patients**



The psychological and social support of patients



Inequity of access (ethnic; geographic; lifestyle)



Disjointed service



Inconsistency in advice



Poor communication and data

### **Clinicians**



Managing and reducing staff fatigue & increasing recruitment and retention



Innovation and machine perfusion



Access to theatres and beds in wards and intensive care units



Disjointed commissioning



Length of the donation, offering and allocation processes



Data access and imaging

### **Direction of Travel**



**NOTE** – Recommendations are not yet finalised.



Patient centred focus, involvement, choice, information and education along the whole care pathway, PROMs, PREMs



Collaboration with other units and centres through a buddying scheme and building on lessons learned through COVID



The use of innovation and novel technologies, such as machine perfusion



Standardisation and strategic direction and leadership with national oversight



Improved access to data, to inform patient and clinical decision making and resource allocation



Workforce sustainability, resilience and training to meet current and future needs

# Message from Maria Caulfield

"Last week marked the second anniversary of Max and Keira's Law, which introduced opt out as the legal basis for consent for donation. As we see consent rates increasing, it is important that we make the best use of every donated organ, with all patients on the waiting list across the country being given the same opportunities for a life-saving transplant.

We need to build on the collaboration developed across transplant communities throughout the pandemic. We also need to build on the progress we have made with innovations such as machine perfusion.

I am grateful to the Organ Utilisation Group for leading the way with this important work. I look

forward to seeing the recommendations and working with all those across the NHS to deliver improvements, which will place the UK back as a world-leader in this life-saving treatment, keeping the quality of patient care and the need for equity at the core of everything we do."

Maria Caulfield, Parliamentary Under Secretary of State (Minister for Patient Safety and Primary Care)





# **Next steps**

- Steer from Ministers on draft recommendations then publish
- Implementation
  - Few 'quick wins'
  - Commitment and drive from Government, commissioners, NHSBT, Trusts, Transplant Teams, Patient Group, Royal Colleges, NHS Digital...
  - Implementation oversight group to align approach and monitor progress



# Organ Utilisation Group: Q&A

Please go to <a href="https://www.menti.com">www.menti.com</a> on your smartphone or tablet and enter code 2919 9319







# Organ Utilisation Group: Patient Feedback

Fiona Loud
Hilaria Asumu

# Patient Engagement: Survey

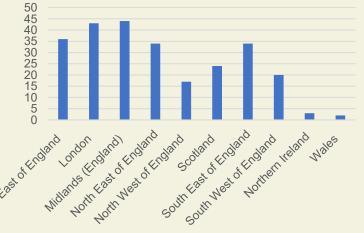


A survey was shared in February 2022 to further hear from people who are waiting for, or have had, transplants, plus their families and carers, and capture those "less heard voices" and their experiences of transplant services. We asked for them to rate different aspects of their care using a 1 to 5 star rating. The survey was anonymous and covered both deceased and living donation.

### **Demographics**

- 258 responses were received from people from 10 regions across the UK.
- There were **193** respondents that had received a transplant and **26** who were on the waiting list.
- **42** people answered as family members / carers of those either on the waiting list or have received a transplant.
- The majority (252) were answering as or on behalf of an adult, with 6 people answering on behalf of a child.
- 19 respondents had received a kidney / liver transplant from a living donor
  - Of these respondents, 14 people received their organ from a family member or friend, and 1 person received their organ from someone who responded to a media/social media appeal

Where did you receive the majority of your care?

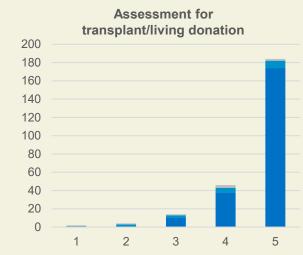


# Patient Engagement: Survey



Experience ratings for pathway stages by respondent ethnicity (5 "star" scale) Blood and Transplant

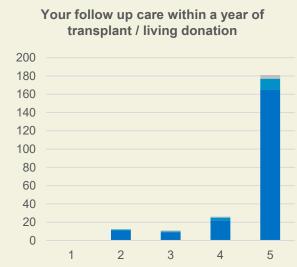


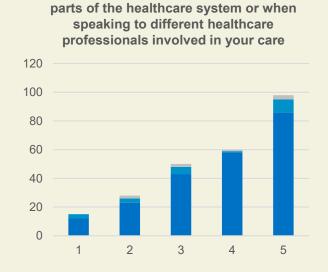




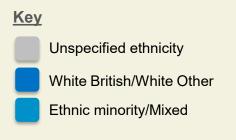








**Experience of moving between different** 



# Patient Engagement: Survey

### NAS Blood and Transplant

Further comments

The care my son received before receiving a transplant was amazing.

The clinical and nursing provision was very good and sensitive.

I found it very hard to talk to anyone as I saw a different person every time. Transplant itself was fine in terms of the surgery but the information given re. what would happen and when etc. was very poor.

Both myself and my family have received amazing care from the transplant team. My post transplant team are the most exceptional, caring and amazing team who I have ever had the fortune to meet.

After the transplant, having to travel 2 hours in hospital transport at 6am 2 times a week was a huge demand.

Services offered were not uniform. Some are better than others, generally satisfactory. System and communication was disjointed.



### Focus Group 1: Kidney

- 1 Asian; 5 Black; 2 White delegates
- 1 parent of paediatric patient with special needs
- 1 representative of adult special needs patient
- 2 male and 6 female delegates

### Focus Group 2: Lung

- Pre- and post-transplant
- 1 male and 4 female delegates
- 1 representative of a patient who had been a child at the time of listing

### Focus Group 3: Kidney

- Pre and post-transplant
- 6 Black delegates
- 2 delegates on the waiting list
- 2 male and 4 female delegates

### Focus Group 4: Liver

- Pre and post-transplant
- 8 delegates
- 4 male and 4 female delegates
- Experience of transplant during COVID
- Difficulties experienced in identifying patients willing to engage and participate.



### **Blood and Transplant**

### **General feedback**

- General happiness with initial care (dialysis; Cystic Fibrosis services)
- Disjointed service, with patients getting lost in the system and medical records not being shared effectively, which compromise patient care/ safety
- Lack of psychological support for patients and their families, which had a strong adverse impact on their experience, relationships and well-being
- Disparity in the level of care offered between different centres
- Poor communication, meaning some patients were concerned and confused
- Inconsistency in advice received
- Many patients explained how they had to fight to get the care they need

They never look at a patient as a whole.

The team became like an extended family.

They were on my side.
They want you to survive and will do everything in their power to help you

I felt lonely and saw no-one and had no support. I felt forgotten.

You rely on peers to support you, as you don't want to trouble the nurses.



### **Blood and Transplant**

### **Kidney Focus Group**

- Lack of compassionate care
- Belief from many patients that the level of care offered is dictated by ethnicity of the patient
- Concerns regarding provision of pain medication with several patients reporting being left in agony for long periods of time.
- Medical data is not shared effectively between teams and services, meaning that some patients received
  care that they believed risked their safety.
- Inconsistency in advice and poor communication regarding living donation (e.g. who could be a donor, options for donors from family who are overseas)

Just because he has special needs, he shouldn't be denied the right to live.

There are some wards I refuse to go on because of malpractice. I'm scared to go to sleep in case they make a mistake.

I was on the transplant waiting list but am suspended now. I don't want to go back on the list as I don't trust them with my life.

The Doctors stick together and don't admit their mistakes.



### **Blood and Transplant**

### **Lung Focus Group**

- Generally good support for cystic fibrosis patients pre-transplant.
- General (but not universal) positive feedback about commitment and approach taken by transplant teams.
- No reliable source of information for 'every day' queries from patients e.g. diet, contraception, welfare benefits.
- Inconsistency in experience regarding referral approach

As far as I'm concerned they've just let me go. I am completely unsupported with my CF and my depression.

The false alarms gave me a boost and helped me keep my head above the water until the final call came. I knew that they were thinking about me.

I'm so thankful to be on the list and considered for a transplant.

The false alarms were upsetting.



### **Blood and Transplant**

### 2<sup>nd</sup> Kidney Focus Group

- Dedicated, compassionate and attentive transplant teams
- Level of information received was great and professionalism was outstanding
- The service they received varied, highlighting the lack of equity
- Medical data is not shared effectively between teams and services inconsistency of communication
- Moving between parts of the system was difficult, but the care received once integrated was good
- Little support and flexibility for those with competing priorities and obligations (e.g., work, studies)

They asked very obvious questions when they could have checked my notes, I felt like I was being tested.

They were always making sure I was okay, checking up on me and making sure I understood everything that was going on.

When I got the information [regarding my transplant] I was so excited at how everything would happen, they were so encouraging.

It's not easy being a patient when you're a student, I need to work really hard to provide for myself, and there is little support.



### **Blood and Transplant**

### **Liver Focus Group**

- Workup was great, with the team checking in often
- Collaboration between transplant centres worked really well
- Transplant centre takes responsibility for the post-transplant care (immunosuppressants, bloods etc.)
- Took a bit of time to get contacted and on the system after moving centres
- Liver care is a postcode lottery
- Kept feeling as if they were forgotten about, which got a lot worse during COVID

I was treated really really well,
I have nothing but praise, for
the coordinators as well

Care was absolutely first class; I couldn't complain about a single thing.

Communication between the hospitals was ridiculous – it was by letter and the visibility of info wasn't consistent.

There should be a gentler way on how to convey the news of transplant when you're not expecting it – it left me frazzled.

The care and advice given wasn't consistent across different centres.

# Patient Engagement: Ethnic minority perspective





### Hilaria Asumu

Hilaria is a kidney disease and transplant patient. She received her transplant in 2018. She became an Ambassador for Organ Donation with NHS Blood and Transplant, and also a peer educator with Kidney Research UK.

Hilaria is actively involved in the black African community in Greater Manchester and other counties across the UK. She is the chair of WSH BME Kidney Network and works as an advocate for African-Caribbean kidney patients and their families navigating government institutions like the police, social services, the workplace, hospitals, schools for children etc.





### **Afternoon Break**



# Delivering positive change

**Stephen Posey** 

**Chief Executive** 

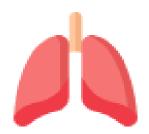
Royal Papworth Hospital NHS Foundation Trust





# About us













Largest specialist cardiothoracic hospital in UK The UK's main heart and lung transplant centre

Elective care

Leading centre for cystic fibrosis

Emergency cardiology care

Largest sleep study centre in the UK



	1979	UK's first successful heart transplant operation takes place
apworth	1984	Europe's first successful heart-lung transplant is performed
	1986	World's first heart, lung and liver transplant takes place
	2001	UK national centre for pulmonary endarterectomy established
	2011	UK's first Total Artificial Heart patient discharged home
<b>Q</b>	2015	Europe's first successful heart transplant via donation after circulatory
1		death (DCD)

Since 1979, we have carried out around 3,000 heart, lung and heart-lung transplants, with world-leading survival rates, the shortest waiting lists and an increasing number of patients living 30+ years post-transplant.









Know your governance structures



Learn from best practice



Engage with your leadership team



Understand the wider context



Listen to patients, staff and communities



These things will
help when
proposing
developments and
prioritisation of
transplants and
organ utilisation



# Thank you

Comments and questions welcomed





# Lessons from a CEO: Q&A

Please go to <a href="https://www.menti.com">www.menti.com</a> on your smartphone or tablet and enter code 2919 9319







# Wrap up & Session Close

Diana Garcia Saez



Recap: Final Reflection

Please go to <a href="https://www.menti.com">www.menti.com</a> on your smartphone or tablet and enter code 2919 9319

