

**NHS BLOOD AND TRANSPLANT
ORGAN DONATION AND TRANSPLANTATION DIRECTORATE
PANCREAS ADVISORY GROUP**

PANCREAS FAST TRACK SCHEME IN-DEPTH ANALYSIS

SUMMARY

BACKGROUND

- 1 A revised Fast Track Offering Scheme (FTS) was introduced on 14 December 2015. The scheme has been monitored regularly but a more in-depth analysis of those donors offered via the scheme was requested due to the large volume of fast track offers received by centres.

INTRODUCTION

- 2 This paper investigates fast track offers of donors in a six-month time period 14 December 2017 to 13 June 2018 and all donors whose pancreas was transplanted after a fast track offer between 14 December 2015 and 13 June 2018.

RESULTS

- 3 Of 245 pancreas donors in the six-month period, 90 (35%) were offered via the fast track scheme and just two (2%) were aged over 60 years. 34 (38%) had a cold ischaemic time (CIT) at time of fast track offer of over 6 hours and of those 17 had a CIT of over 8 hours. Of the 34, none resulted in a transplant. Of the 90 donors offered via the scheme, 12 (13%) resulted in a transplant and these 12 donors were aged under 57 years.
- 4 Of the 90 donors offered via the FTS, 49 (54%) were because the organ was declined after retrieval commenced. The main reasons given were the organ was fatty (49%), damaged (14%) or due to recipient reasons (14%). Of these 49, 5 resulted in a transplant. A further 15 donors (17%) were fast tracked as the organ was deemed unusable and none of these resulted in a transplant.
- 5 In the period 14 December 2015 to 13 June 2018, there were a total of 34 pancreases transplanted, either as a whole organ or as islets, following a fast track offer. 33 (97%) of the donors were aged under 60 years and one was aged 63 years. In 14 (41%) cases the reason for fast track was the organ had been declined after retrieval commenced and a further 15 (44%) were fast tracked after being declined by 3 or 4 centres for donor or organ related reasons. All 34 either had no CIT at time of fast track offer or it was less than 6 hours.

RECOMMENDATIONS

- 6 In total, based on this six-month cohort of fast track offers, if all organs deemed unusable and all organs with a CIT of more than 8 hours were not fast tracked there would be a reduction of 31% in donors offered via the fast track scheme. Based on the analysis of all transplants of organs offered via the scheme there would be no loss of transplants. The definition of 'unusable' will need to be considered carefully if these suggestions are approved by PAG.

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BACKGROUND

- 7 A revised Fast Track Offering Scheme (FTS) was introduced on 14 December 2015, which initiated fast track offering of a pancreas if; the organ had been declined by 4 centres (for a donor after brain death (DBD)) or 3 centres (for a donor after circulatory death (DCD)) for donor or organ reasons, the pancreas had been removed from the donor, the pancreas was not accepted by knife to skin (KTS) or the organ was deemed unsuitable for transplantation.
- 8 A more in-depth analysis of those donors whose pancreas was offered via the fast track scheme was requested due to the large volume of fast track offers being received by centres. ODT Hub Operations recorded a clear reason for fast tracking the pancreas from 14th December 2017.
- 9 The current maximum donor age in years for pancreas donors are

Transplant type	DBD	DCD
Whole	65	55
Islets	60	50

INTRODUCTION

- 10 This paper investigates in more detail fast track offers from donors in the six month period from 14 December 2017 to 13 June 2018. A short time period of fast track offers was investigated due to the need to review ODT Hub Operations' notes in text format on each of the donors. This was necessary to obtain the reason for fast track and whether the organ arrived at the accepting centre before the fast track offer was made. The cold ischaemic time (CIT) at time of fast track offer was calculated as the time between perfusion commenced and fast track offer.
- 11 Additionally, all donors whose pancreas was transplanted after being offered through the fast track scheme between 14 December 2015 and 13 June 2018, were investigated.

RESULTS

Fast Track offers 14 December 2017 to 13 June 2018

- 12 There were 254 pancreas donors aged 65 or under in the six-month time period and 90 (35%) were offered via the fast track scheme; 68 (76%) were DBD and 22 (24%) DCD. Of the 90 donors, 90% were aged 55 years or less, 8% were aged 56 to 60 and 2% were aged 61 years or older.

- 13 Of those 90 organs offered via the fast track scheme, 34 (38%) had a CIT greater than 6 hours at the time of fast track offer and none resulted in a transplant. Of the 34, 17 (19% of the 90 organs) had a CIT greater than 8 hours.
- 14 Of the 90 fast tracked donors, 12 (13%) were transplanted in total; ten of the 68 DBD and two of the 22 DCD donors. All of the organs transplanted after fast track offer were from donors aged under 57 years in the six-month period.
- 15 The triggers for these 90 organs being offered via the FTS, obtained from Hub Operations notes, are shown in **Table 1**. Over half of the donors were fast tracked because the organ was declined after retrieval commenced. This was either after knife to skin (KTS), cross clamp or retrieval of the organ. The main reasons given for decline were that the organ was fatty in 24 (49%), damaged in seven (14%) or due to recipient reasons in seven (14%) of cases. The reasons “declined by 4 centres” and “declined by 3 centres” are where the organ was declined for donor or organ specific reasons by centres and these accounted for 16%. The main reasons given were past medical history, size, age or function.

Trigger for fast track offer	Transplanted				Total	
	No		Yes		N	% of total
	N	(%)	N	(%)		
Declined after retrieval commenced	44	(90)	5	(10)	49	54
Deemed unusable	15	(100)	0	(0)	15	17
Declined post isolation	8	(100)	0	(0)	8	9
Declined by 4 centres (DBD)	4	(50)	4	(50)	8	9
Declined by 3 centres (DCD)	4	(67)	2	(33)	6	7
Not accepted by KTS	2	(100)	0	(0)	2	2
RM authorisation/unstable donor	1	(50)	1	(50)	2	2
TOTAL	78	(87)	12	(13)	90	100

- 16 **Figure 1** gives a summary of the organs offered via the FTS in the time period by the trigger group for fast track offer.
- 17 Of those 18 organs fast tracked due to 3 or 4 centres declining for organ or donor reasons, not accepted by KTS or authorised by a Regional Manager, 17 were fast tracked prior to perfusion commencing and one had a CIT of 19 minutes. In seven of these 18 cases the organs were subsequently transplanted and accounted for 58% of the fast tracked organs transplanted.
- 18 There were 64 donors whose pancreas was fast tracked due to either being declined after retrieval commenced or deemed unusable. Of these 64, 17 (27%) were found to have a CIT of more than 8 hours at the time of the fast track offer. Of these 17, none resulted in a transplant and 16 had arrived at the accepting centre prior to fast track offer.

- 19 Of the remaining 47 donors, all with a CIT at time of fast track offer of 8 hours or less, 31 (66%) had arrived at the accepting centre and two (6%) were subsequently transplanted. The remaining 16 did not arrive at the accepting centre before being fast tracked and three (19%) of these were subsequently transplanted.
- 20 For these 47 donors, with a CIT at time of fast track offer of 8 hours or less, the median donor age was 46 years (Interquartile (IQ) range 35 to 50). The median donor BMI was 24.9 (IQ range 22.2 to 26.6).

Organs transplanted after fast track offer 14 December 2015 to 13 June 2018

- 21 In this time period, 34 pancreases (28 (82%) DBD, 6 (18%) DCD) were transplanted after a fast track offer; 20 SPK, 11 islet alone, 1 SIK, 1 PTA and 1 multivisceral transplant. The median age of these 34 donors was 46 years (IQ range 36-51 years). Of the 34, 33 were aged under 60 years and the maximum age of the DCD donors was 50 years and for DBD was 63 years.
- 22 The median BMI of those donors transplanted was 24.4 (IQ range 22.2 to 27.3). For whole organ transplants the median BMI of the donor was 23.4 (IQ range 19.2 to 25.1). For islet transplants the median BMI of the donor was 27.7 (IQ range 25.6 to 32.3).
- 23 The triggers for these 34 transplanted organs being offered via the fast track scheme are shown in **Table 2** by transplant type. Where an organ was declined by 3 or 4 centres for organ or donor reasons, the main reasons quoted were past medical history, size, age or function.

Table 2 Donors whose organ was transplanted after being fast tracked, 14 December 2015 to 13 June 2018

Trigger for fast track offer	Transplant type						Total	
	SPK		ITA		Other		N	% of total
	N	(%)	N	(%)	N	(%)		
Declined after retrieval commenced	9	(64)	3	(21)	2	(14)	14	41
Declined by 4 centres (DBD)	6	(55)	4	(36)	1	(9)	11	32
Declined by 3 centres (DCD)	3	(75)	1	(25)	0	(0)	4	12
Not accepted by KTS	1	(100)	0	(0)	0	(0)	1	3
RM authorisation/unstable donor	1	(50)	1	(50)	0	(0)	2	6
Declined post isolation	0	(0)	2	(100)	0	(0)	2	6
TOTAL	20	(59)	11	(32)	3	(9)	34	100

- 24 **Figure 2** gives a summary of the organs transplanted after being offered via the FTS in the time period, by the trigger group for fast track offer.
- 25 Of the 34 organs transplanted after fast track offer, two organs were already at the initial accepting centre and two had already been isolated before the fast track offer made. These resulted in one SPK, one pancreas alone and

two islet alone transplants. The remaining 30 had not arrived at the initial accepting centre prior to fast track offer.

- 26 Of the 34 organs, 20 were offered prior to perfusion commencing and two were offered after islet isolation. For the remaining 12 organs, CIT ranged from 10 to 341 minutes (5 hrs 45 mins) at the time of fast track offer.
- 27 Of the 21 pancreases fast tracked and transplanted as a whole pancreas, the total CIT was available in 19 cases. The median CIT was 11 hours (IQ range 10.5-14.3 hours) and the maximum was over 20 and a half hours.

RECOMMENDATIONS

- 28 Based on this analysis, reducing the maximum age of donors offered through the fast track scheme to 60 instead of 65 for DBD donors would make little impact on the number of fast track offers as only 2% of offers were from these donors. One (3%) of the transplants following fast track offer was using an organ from a donor aged over 60 years.
- 29 If a restriction on CIT of 8 hours or less at time of fast track offer was in place, this could reduce the number of fast track offers by around 19%. Of all the 34 organs transplanted via the scheme none had a CIT greater than 6 hours at the time of fast track offer. If a restriction of 6 hours or less was in place, this could reduce the number of fast track offers by around 38%.
- 30 Of the 15 organs offered through the fast track scheme due to being deemed unusable, none were transplanted and it could be recommended that any organ deemed untransplantable by a transplanting surgeon should not be offered via the fast track scheme. Of these 15, 11 had a CIT at time of fast track offer of more than 6 hours and four had a CIT of more than 8 hours. Therefore, using this exclusion criterion in addition to the CIT criterion of more than 8 hours would reduce the number of fast track offers by an additional 12%.
- 31 In total, based on this six-month cohort of fast track offers, if all organs deemed unusable and all organs with a CIT of more than 8 hours at the potential point of fast track offer were not fast tracked, there would be a reduction of 31% in donors offered via the fast track scheme (approx. 50 donors per year). Based on the analysis of all transplanted organs offered via the FTS there would be no loss of transplants. PAG would need to consider carefully the definition of 'unusable' as defined by the assessing implanting surgeon, i.e. does this relate to all patients on the national waiting list or just the specific recipient at the accepting centre?

Figure 1 Organs offered via the Fast Track Scheme, 14 December 2017 – 13 June 2018

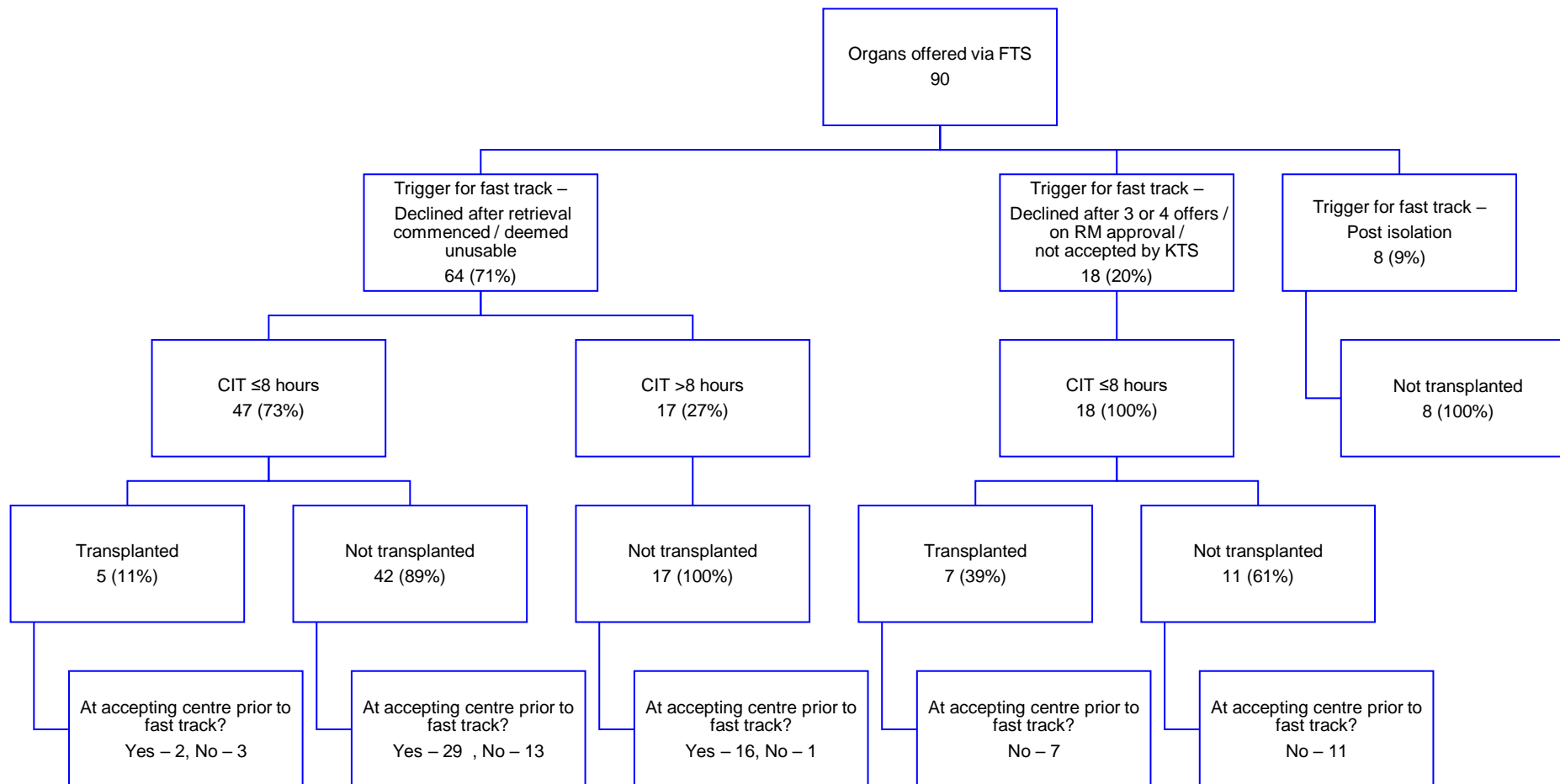


Figure 2 Organs transplanted after offering via the Fast Track Scheme, 14 December 2015 – 13 June 2018

