



Deonú agus Trasphlandú Orgán Éireann
Organ Donation Transplant Ireland

Organ Donation Transplant Ireland 2022

ANNUAL REPORT



Organ Donation and Transplant Ireland (ODTI) has been delegated the regulatory functions assigned to the Health Service Executive (HSE) in Statutory Instrument (SI) 325 (2012), European Union (Quality and Safety of Human Organs Intended for Transplantation) Regulations 2012.

This annual report has been produced in compliance with part 5, SI 325 (2012):

25 (1) The HSE shall—

- (a) keep a record of the activities of procurement organisations and transplantation centres, including aggregated numbers of living and deceased donors, and the types and quantities of organs procured and transplanted, or otherwise disposed of in accordance with European Union and national provisions on the protection of personal data and statistical confidentiality,
 - (b) draw up and make publicly accessible an annual report on activities referred to in subparagraph (a), and
 - (c) establish and maintain an updated record of procurement organisations and transplantation centres.
- (2) The HSE shall, upon the request of the Commission or another Member State, provide information on the record of procurement organisations and transplantation centres.

Contents

Director's Statement	5
Donation Activity per hospital Group	7
Organ Donation and Transplant Summary	8
Transplant Centre Activity	11
Organ Specific Activity	11
National Renal Transplant Service, Beaumont Hospital	13
Transplants, Waiting List, Survival	15
National Liver Transplant Service, St Vincent's University Hospital	18
Transplants, Waiting List, Survival	18
National Pancreas Transplant Service, St Vincent's University Hospital	21
Transplants, Waiting List, Survival	22
National Heart & Lung Transplant Service, Mater Misericordiae University Hospital	23
Transplants, Waiting List, Survival	24
Paediatric Transplant Activity	28
Quality Framework	30
Acknowledgements	32
Bibliography	34

Tables

Table 1	Donation activity per hospital group 2018 – 2022	7
Table 2	Organ donation and transplant summary 2018 – 2022	8
Table 3	Patient survival after first elective adult liver only transplant from a DBD 1 January 2008 - 31 December 2021	20

Figures

Figure 1	Total organ donations and transplant 2018 -2022	9
Figure 2	Donated organs utilised abroad	9
Figure 3	Donor cause of death 2022	10
Figure 4	Donor age 2022	10
Figure 5	Deceased donation gender	11
Figure 6	Organ specific transplant activity	11
Figure 7	Conversion rates: deceased donor offers to transplant (n=86)	12
Figure 8	Kidney transplants 2018 – 2022	15
Figure 9	Kidney transplant waiting list 2018 – 2022	15
Figure 10	First adult only kidney transplants 2012 - 2021 living donor	16
Figure 11	First adult kidney only transplants 2012 - 2021 deceased donor	16
Figure 12	Adult first deceased donor allograft 2012 – 2021	17
Figure 13	Adult first living donor kidney allograft survival 2012–2021	17
Figure 14	Liver transplant 2018 – 2022	18
Figure 15	Liver transplant waiting list 2018 – 2022	19
Figure 16	Long-term patient survival after first elective adult liver only transplants from DBD donors, 1 January 2008 – 31 December 2021	19
Figure 17	Long-term graft survival after first elective adult liver only transplants from DBD donors, 1 January 2008 – 31 December 2021	20
Figure 18	Pancreas transplants 2018 – 2022	22
Figure 19	Pancreas transplant waiting list 2018 – 2022	22
Figure 20	Heart transplants 2018 – 2022	24
Figure 21	Heart transplant waiting list 2018 – 2022	24
Figure 22	Survival post cardiac transplant	25
Figure 23	Lung transplants 2018 – 2022	26
Figure 24	Lung transplant waiting list 2018 – 2022	26
Figure 25	Survival post lung transplant (January 2012 - December 2021)	27
Figure 26	Paediatric kidney transplant (<19yrs at time of transplant) 2018 – 2022	28
Figure 27	Irish paediatric transplants performed in the UK 2018 – 2022	28
Figure 28	Irish paediatric waiting list in the UK end of december	29
Figure 29	Quality and safety review 2018 – 2022	31
Figure 30	Non conformance by cause	31

Director's Statement

Organ donation saves lives

The COVID-19 surge in early 2022 led to relatively low rates of organ donation in the first quarter of the year. While the wider health service entered the "living with COVID" era, rates of organ donation and transplantation continued to be disproportionately negatively affected owing to deficits in key infrastructure. This required infrastructure includes critical care beds, specialist in-patient beds and transplant operating theatre capacity. These observations reinforce that targeted funding is required to deal with infrastructure deficits to provide the required capacity to deliver organ donation and transplant services. In tandem with the deployment of appropriate infrastructure, health policy must provide mechanisms to protect transplant service infrastructure, against unscheduled care demands therefore, enabling services to deliver appropriate quantities of transplant surgery.

A strategic planning process was commissioned in late 2022 with a view to future-proofing ODTI and the hospital based donation and transplant services against increasing demands, rapid technology changes and an increasingly complex legislative and regulatory environment. The output of this initiative will provide a roadmap to inform service development for the next 10 years.

The emerging introduction of an opt-out status for organ donation in Ireland took a welcome advance when Taoiseach Micháel Martin announced in July that the Human Tissue (Transplantation, Post-Mortem, Anatomical Examination and Public Display) Bill would be prioritised by government. This culminated in the legislation being brought to

cabinet by Minister of Health Mr Donnelly in late November 2022. The Bill remains in the legislative process but its enactment should provide a legal framework for organ donation in Ireland.

ODTI secured funding through the national service planning process which supported necessary developments across a number of domains. These included;

- Specialist personnel including both Surgical and Medical Staff
- Commissioning of a national potential donor audit
- Specialist staff appointments at the National Histopathology and Immunogenic Service
- Enhancing Organ Donation Staffing – specialist organ donation nursing staff
- Commissioning of an Electronic Offering System
- Organ support systems

We must reflect on the incredible generosity and courage of 86 families who donated their deceased family member organs and 33 families who donated kidneys through the Living Kidney Transplant Programme. These most noble and courageous gestures have enhanced the lives of 250 of our citizens in 2022. This reaffirms that organ donation saves lives.

Yours sincerely,



**Professor Jim Egan, FRCPI,
Director, ODTI.**

Hospital Groups

RCSI HOSPITAL GROUP

- Beaumont Hospital
- **National Renal Transplant Centre**
- Our Lady of Lourdes Hospital Drogheda
- Connolly Hospital
- Cavan General Hospital
- Rotunda Hospital
- Louth County Hospital
- Monaghan Hospital

DUBLIN MIDLANDS GROUP

- St James's Hospital
- Tallaght University Hospital
- Midlands Regional Hospital Tullamore
- Naas General Hospital
- Midland Regional Hospital Portlaoise
- Coombe Women & Infant University Hospital

IRELAND EAST HOSPITAL GROUP

- Mater Misericordiae University Hospital
- **National Heart and Lung Transplant Centre**
- St Vincent's University Hospital
- **National Liver and Pancreas Transplant Centre**
- Midland Regional Hospital Mullingar
- St Luke's Hospital Kilkenny
- Wexford General Hospital
- Our Lady's Hospital Navan
- St Columcille's Hospital
- St Michael's Hospital Dun Laoghaire
- National Maternity Hospital

SOUTH/SOUTH WEST HOSPITAL GROUP

- Bantry General Hospital
- Cork University Hospital
- University Hospital Kerry
- Mallow General Hospital
- Mercy University Hospital
- South Infirmary Victoria University Hospital
- South Tipperary General Hospital
- University Hospital Waterford

SAOLTA HOSPITAL GROUP

- University Hospital Galway
- Sligo University Hospital
- Letterkenny University Hospital
- Mayo University Hospital
- Portlinculla University Hospital
- Roscommon University Hospital

UNIVERSITY OF LIMERICK HOSPITAL GROUP

- University Hospital Limerick
- Ennis General Hospital
- Nenagh General Hospital
- St John's Hospital Limerick

CHILDREN'S HOSPITAL GROUP

- Children's Health Ireland at Crumlin
- Children's Health Ireland at Temple Street
- Children's Health Ireland at Tallaght
- Children's Health Ireland at Connolly

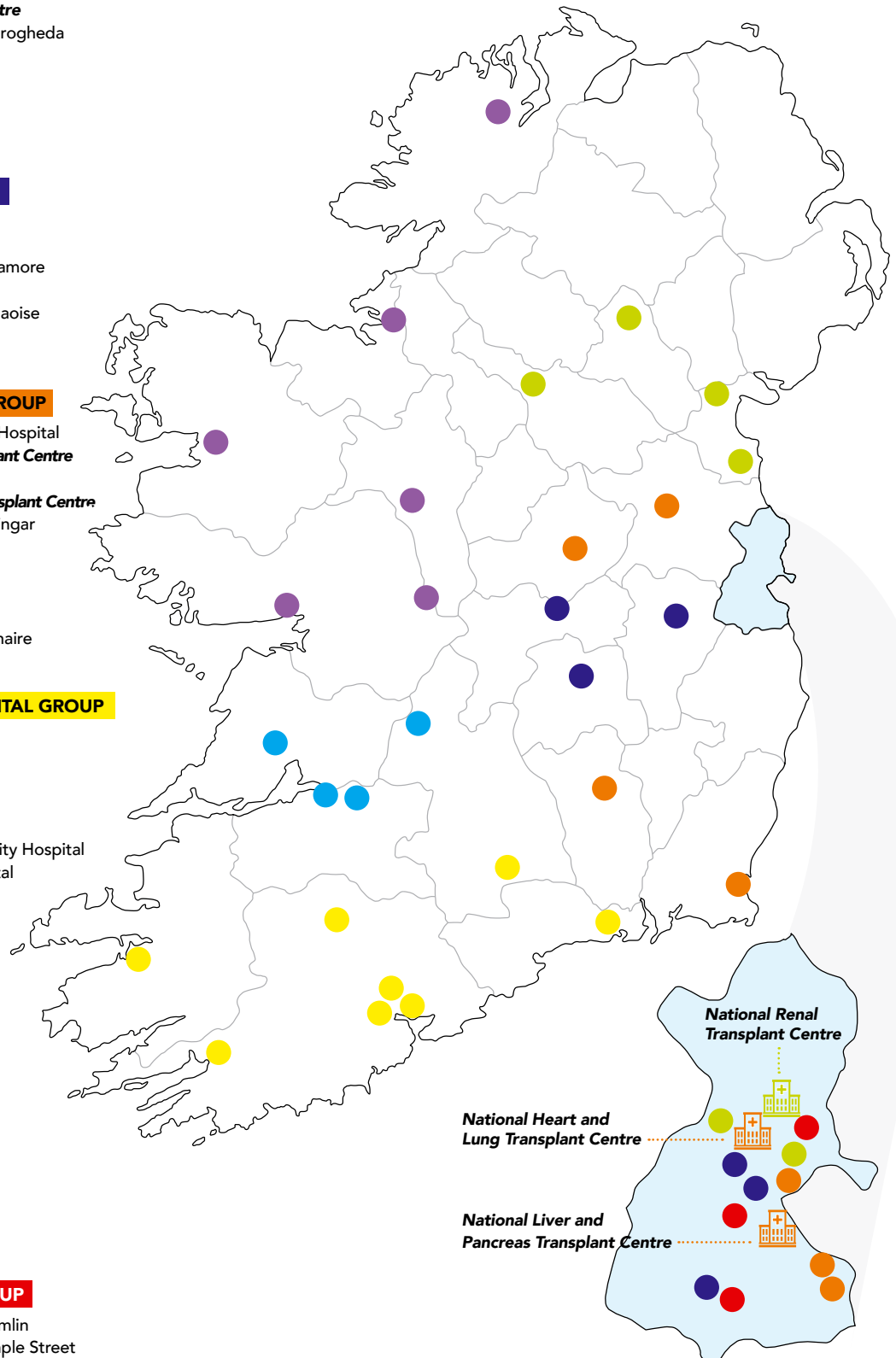


Table 1: Donation Activity per Hospital Group 2018 – 2022

RCSI Hospital Group					
Year	2018	2019	2020	2021	2022
Total	21	23	15	18	22

Beaumont Hospital, Our Lady of Lourdes Hospital Drogheda, Connolly Hospital, Cavan General Hospital, Rotunda Hospital, Louth County Hospital, Monaghan Hospital

Dublin Midlands Hospital Group					
Year	2018	2019	2020	2021	2022
Total	13	11	8	8	9

St James's Hospital, Tallaght University Hospital, Midlands Regional Hospital Tullamore, Naas General Hospital, Midland Regional Hospital Portlaoise, Coombe Women & Infant University Hospital

Ireland East Hospital Group					
Year	2018	2019	2020	2021	2022
Total	15	15	9	7	13

Mater Misericordiae University Hospital, St Vincent's University Hospital, Midland Regional Hospital Mullingar, St Lukes's Hospital Kilkenny, Wexford General Hospital, Our Lady's Hospital Navan, St Columcille's Hospital, St Michael's Hospital Dun Laoghaire, National Maternity Hospital

South/South West Hospital Group					
Year	2018	2019	2020	2021	2022
Total	15	16	15	20	20

Bantry General Hospital, Cork University Hospital, University Hospital Kerry, Mallow General Hospital, Mercy University Hospital, South Infirmary Victoria University Hospital, South Tipperary General Hospital, University Hospital Waterford

Saolta Hospital Group					
Year	2018	2019	2020	2021	2022
Total	10	11	9	7	13

University Hospital Galway, Sligo University Hospital, Letterkenny University Hospital, Mayo University Hospital, Portiuncula University Hospital, Roscommon University Hospital

University of Limerick Hospital Group					
Year	2018	2019	2020	2021	2022
Total	6	7	6	4	4

University Hospital Limerick, Ennis General Hospital, Nenagh General Hospital, St John's Hospital Limerick

CHI Group					
Year	2018	2019	2020	2021	2022
Total	1	2	1	1	5

Our Lady's Children's Hospital Crumlin, Children's University Hospital Temple Street, AMNCH-Tallaght Hospital Paediatrics

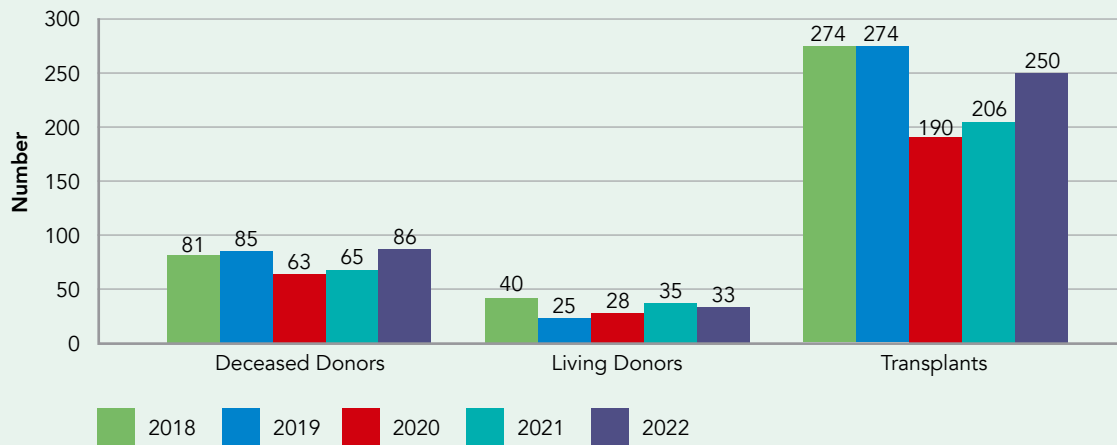
National Yearly Total					
Year	2018	2019	2020	2021	2022
Total	81	85	63	65	86

Organ Donation and Transplant Executive Summary 2018 – 2022

Table 2: Organ Donation and Transplant Summary 2018 – 2022								
		2018	2019	2020	2021	2022	5 year total	5 year average
Donations		81	85	63	65	86	380	76
Transplants from Deceased Donations	Kidney	127	128	95	104	130	584	117
	Liver	56	66	37	35	51	245	49
	Lungs	28	38	16	20	18	120	24
	Heart	18	15	9	10	10	62	12
	Pancreas	5	2	5	2	8	22	4
Total		234	249	162	171	217	1033	207
Living Kidney Transplants		40	25	28	35	33	161	32
UK Paired Kidney Exchange/* 2 desensitise in UK		3	3	1	2	8	17	3
Living & Deceased Kidney Transplants		167	153	123	139	163	745	149
Total Organ Transplants (Not including UK paired exchange)/desensitised		274	274	190	206	250	1194	239

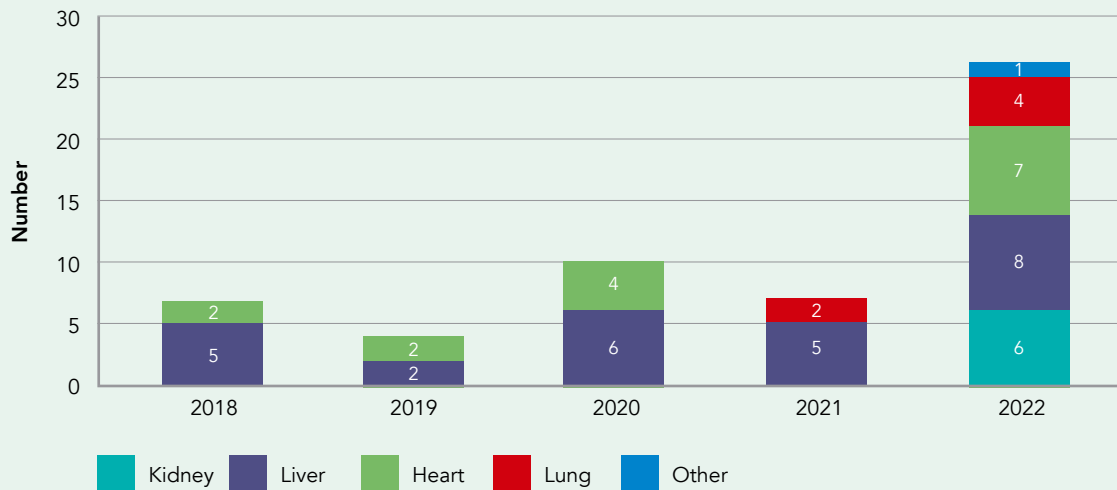
Total Organ Donations and Transplant

Figure 1: Total Organ Donations and Transplants 2018 – 2022



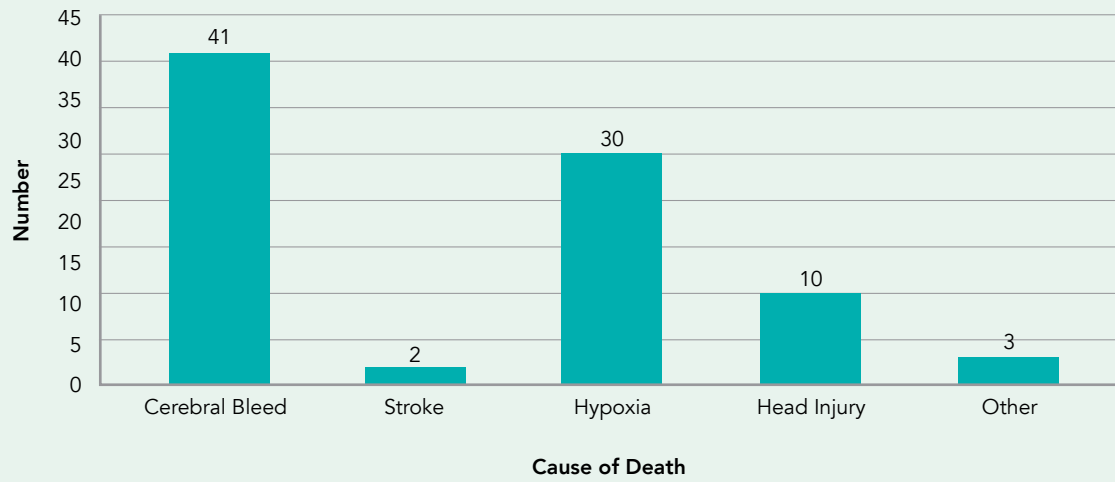
Not including UK** paired exchange or ** desensitised patients. **

Figure 2: Donated Organs Utilised Abroad



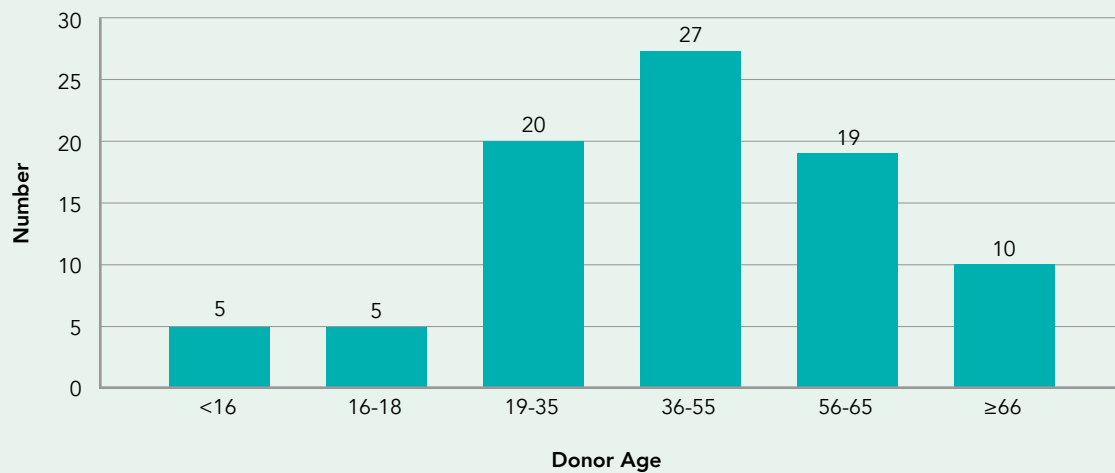
Cause of Death

Figure 3: Donor Cause of Death 2022



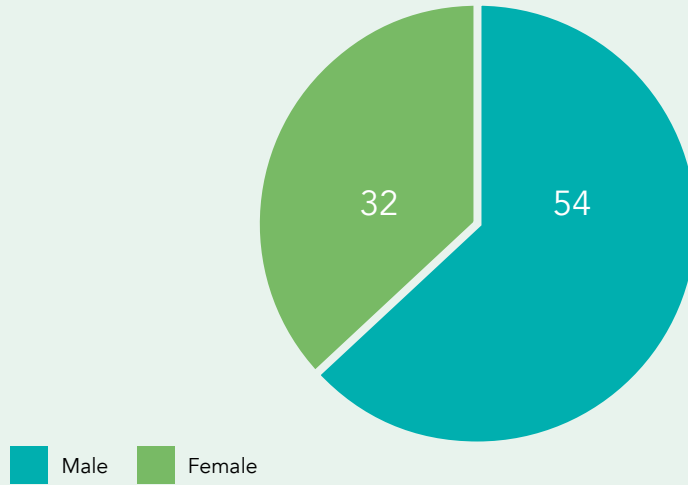
Deceased Donation

Figure 4: Donor Age 2022



Donor Gender

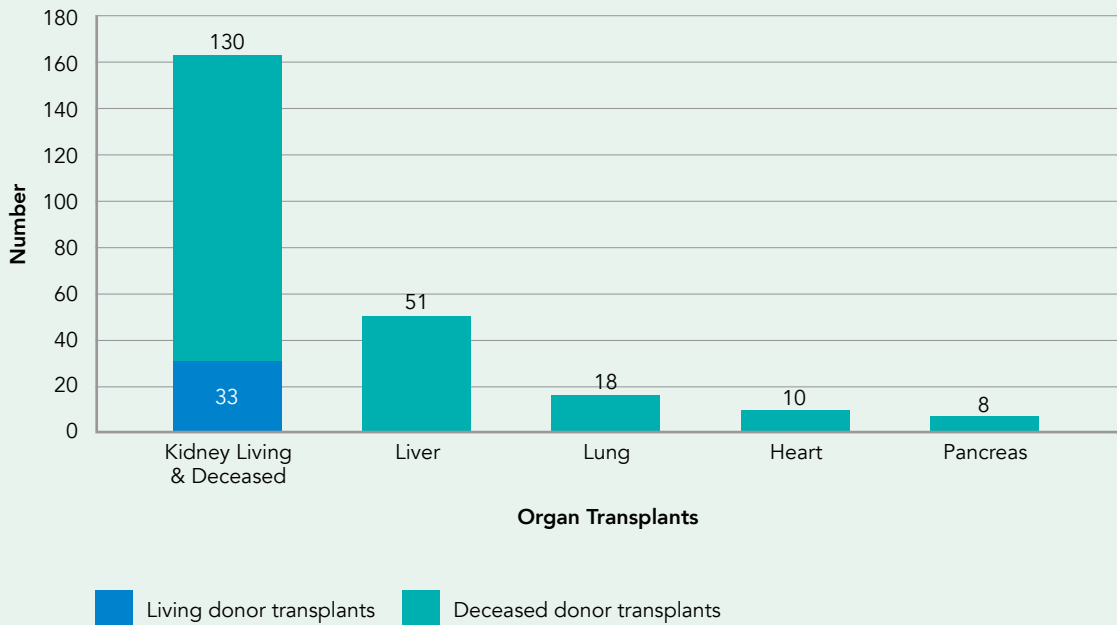
Figure 5: Deceased Donation Gender



Transplantation

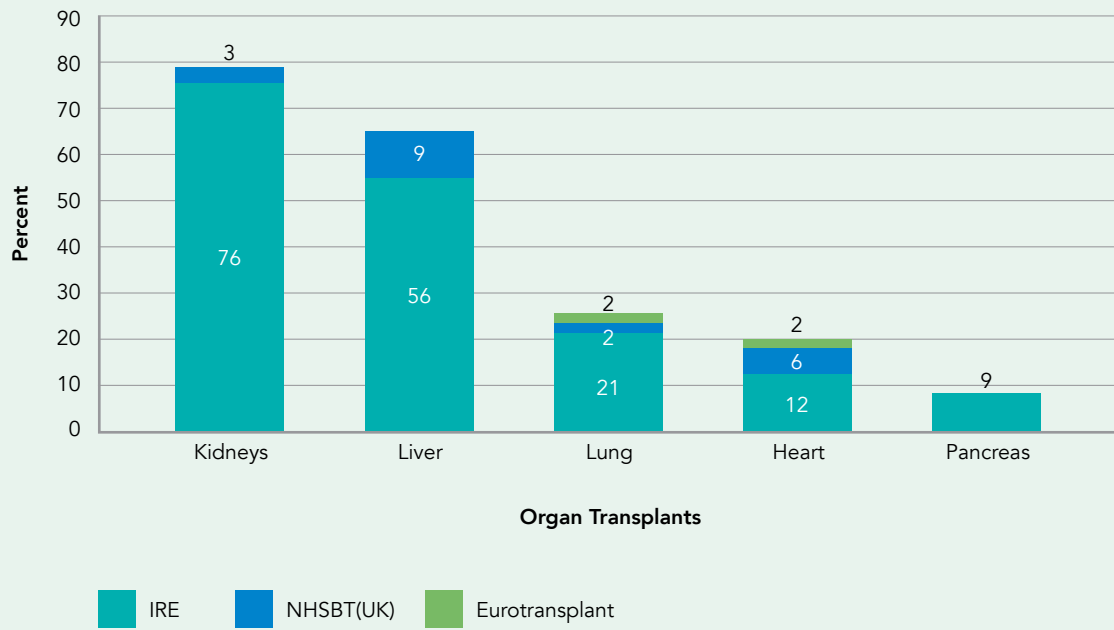
Organ Specific Activity 2022

Figure 6: Organ Specific Transplant Activity



*Not including UK paired exchange or desensitised patients.

Figure 7: Conversion Rates: Deceased Donor Offers to Transplant (n=86)



National Renal Transplant Service, Beaumont Hospital

Kidney Transplantation offers the preferred treatment option for patients with end stage kidney disease (ESKD), offering improved survival benefits and restoring quality of life for those undergoing a successful transplant. The recent COVID-19 pandemic with the risk of severe infection and mortality in patients who are immunosuppressed post-transplant, has posed significant challenges for the safe delivery of kidney transplantation, worldwide. As we learn more about COVID-19 infection and how to adapt to live with the virus and its various manifestations, the National Kidney Transplant Service (NKTS) in Ireland has worked hard to minimise the risks to individual patients while endeavouring to maintain and expand the opportunities for successful kidney transplantation. Challenges such as reduced deceased donor activity due to the admission of COVID-19 positive patients to the Intensive Care Units have lessened, especially in the latter half of 2022 and so transplant activity in this period matched pre COVID-19 rates. The NKTS remains committed to providing a safe environment for admission of patients for transplant surgery and ensuring the safety of living kidney donors and their recipients.

In 2022, we performed 163 kidney transplants, marking a welcome return to pre COVID-19 rates. 130 kidney transplants were performed with kidneys retrieved from deceased donors. Unfortunately, some activity was curtailed by the inevitable presence of positive COVID-19 cases in the transplant ward which resulted in a small number of kidneys retrieved by the NKTS being exported to the UK Transplant Service.

The Living Kidney Transplant programme remained active during 2022 due to the availability of COVID-19 vaccines for potential living donors and their recipients. Despite this, due to COVID-19 infections and other unpredictable clinical situations we faced a number of short notice cancellations of living donor transplants. As potential donors and recipients were shielding from COVID-19 earlier in the year, this posed logistical difficulties in substituting pairs for surgery at short notice. Despite this, the living donor rate was sustained and we performed 33 transplants with approximately 15 donor recipient pairs having completed their evaluations and scheduled for surgery early in 2023.

As end stage renal failure is recognized as a risk factor for COVID-19, all potential kidney recipients on the transplant waiting list are advised to avail of the COVID-19 vaccines and boosters, offered under the National vaccination programme. The medical and scientific evidence indicates that any risks associated with the available vaccines are extremely low compared to the consequences and risks of a transplant patient contracting COVID-19 infection. Obviously, a post-transplant patient on immunosuppression who contracts COVID-19 is extremely vulnerable to severe infection with an associated risk of death or long-term illness. Patients with cardiovascular disease, respiratory disease, diabetes, obesity and age greater than 60 years are especially at risk. The vast majority of patients on the transplant waiting list have taken up this advice and have been vaccinated. Unfortunately, with the arrival of variants and the relaxation of community restrictions, the increased transmission risk of the virus has meant the risks to transplant recipients is magnified. Renal transplant recipients are strongly advised to keep up their immunity by adhering to public health advice regarding vaccination not only for COVID-19, but for influenza and all other appropriate vaccines.

To reduce the risk of exposure to infection for transplant recipients post discharge from hospital, the NKTS has adopted the use of virtual clinics and remote monitoring, using a purpose designed system. This system continuously tracks symptoms, blood pressure, weight and laboratory results in the patient's home, reducing the need for hospital attendance by 70% post transplantation. Patients can monitor their own data by downloading an App onto their mobile phone. Thanks to the support of the HSE Community intervention team, laboratory tests can be performed on blood drawn in the patient's home, reducing the need for hospital visits. This project was supported by Slainte Care and has been extremely successful in allowing the delivery of patient focused care.

Because of the requirement of augmented immunosuppression required to transplant "highly sensitised" recipients, these patients are especially at risk if they contract COVID-19 or other infections. We prioritise these patients on the transplant waiting list and in 2022, 25 very highly sensitised patients (PGen \geq 95%) were transplanted, including a recipient who had

waited more than 20 years for their transplant. Analysis of donor specific antibody status pre-transplant, allowed these patients to be transplanted. Continuous monitoring of the immune response in these patients is especially important post-transplant, to ensure that a late rejection episode is treated in a timely fashion.

There were 21 kidney transplants performed from deceased cardiac donation (DCD) donors with one donor hospital referring their first such donor. In July 2022, we conducted our second laboratory based simulated training day in the Royal College of Surgeons in Ireland for non-consultant surgical trainees and newly appointed advanced nurse practitioner candidates, focusing on the surgical skills and techniques of kidney retrieval surgery. This training was supported by Organ Donation Transplant Ireland and was extremely well received by all attendees. We plan to run this course as an annual event. In addition, the NKTS at Beaumont Hospital was approved as an accredited renal transplant surgical training centre by the UEMS European Board of Transplant Surgery, following a successful inspection process in September 2022. The number of patients alive with a functioning kidney transplant at year end 2022 is 2,544 (recipients who were transplanted at Beaumont Hospital), showing a slight increase compared to 2021.

The number of patients listed on the transplant waiting list remained stable compared to 2021 with a total of 512 listed at the end of 2022. In 2022, 187 new patients were listed for kidney transplant representing an increase of 25% on the previous year. However, the global shortage of organs relative to the number of patients waiting for a kidney transplant remains an on-going challenge - the overall median time on the kidney transplant waiting list increased to 26 months.

Irish Kidney transplant outcomes continue to be excellent. The median allograft survival of a first deceased adult donor is 14.1 years for the last 30 years. Based on the most recent data (2017 - 2021), one year Irish kidney transplant outcomes are excellent, with one year adult deceased donor allograft survival of 97% and patient survival of 98%. Currently, 23 recipients have a functioning kidney 40 years or more after their transplant.

We performed 33 living donor transplants in 2022. This included 5 paediatric kidney transplants from living donors. While allograft outcomes for living donor transplants are comparable to that for deceased donor transplants in the first year (95% and 93% respectively) and for patient outcomes (100% and 97%), the benefits of living donor

transplantation become apparent in subsequent years. At 5 years post-transplant, living donor allograft and patient survival was 90% and 97% respectively compared to 81% and 89% deceased donor survival. In addition, patients who received a living kidney donor spent considerably less time waiting for a transplant and less time on dialysis, with a significant number avoiding the need for dialysis entirely. These outcomes highlight the enormous advantages of living kidney donation and illustrate why living donation should be the first choice for the majority of Irish patients.

We continue to benchmark PVS data against the European Collaborative Transplant Study (CTS) and our outcome data exceeds the CTS for many groups. Patients undergoing repeated transplants of 2nd, 3rd or 4th kidney transplants in Dublin have outcome data that exceeds the CTS data in all time periods.

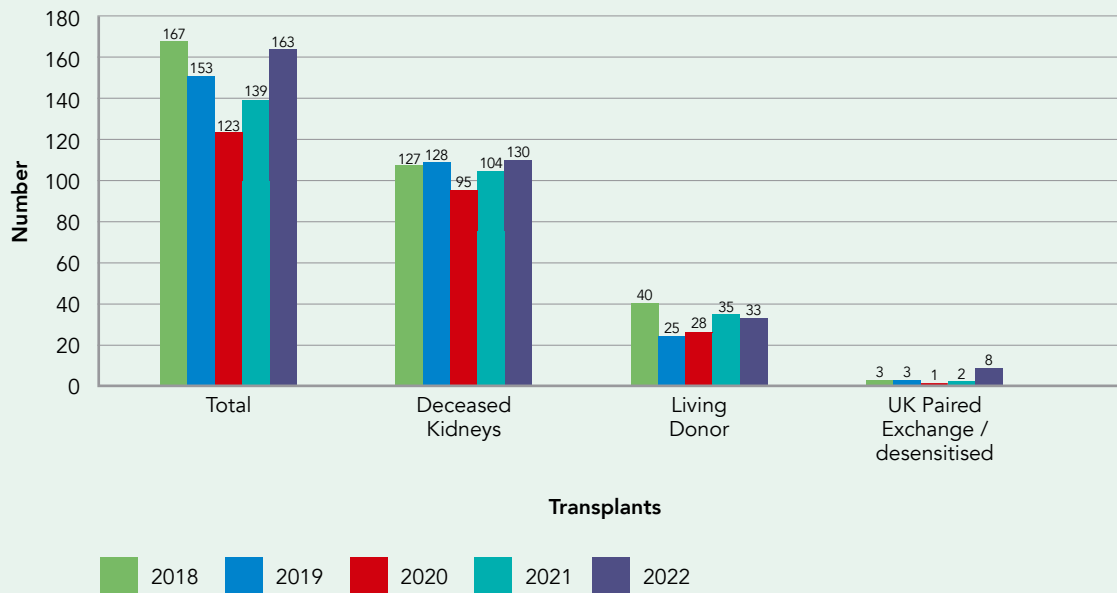
In summary, 2022 has again proven to be one of the more challenging years for everyone involved in healthcare provision but especially for patients awaiting a life-changing kidney transplant. We would like to acknowledge the on-going work and efforts of all the members of the transplant team, the staff of the Intensive Care Units throughout the country and all the staff in Beaumont Hospital who continue to support us. We would especially like to acknowledge the forbearance of the patients that depend on this transplant programme and the bravery of the living kidney donors. We will continue to strive to provide the best and safest standard of care to all our patients.

Finally, we are continuously humbled by the generosity shown by all kidney donors and their families. Every deceased donor kidney transplant comes at a time of utmost tragedy for families, who look beyond their own loss and grief to save the life of another person. Living donors place themselves in harm's way to help a loved one, often without a second thought. As such, we have witnessed the best of human nature through working in this programme and wish to thank all donors and their families for their generosity.

Ms. Dilly Little
Consultant Transplant Surgeon
National Renal Transplant Service
Beaumont University Hospital

Kidney Transplants 2018 – 2022

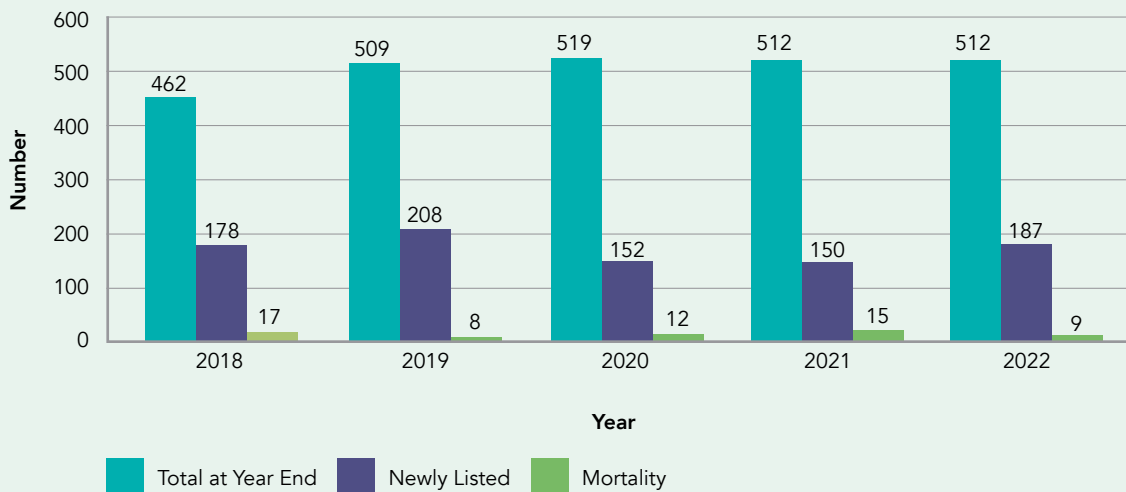
Figure 8: Kidney Transplants 2018 – 2022



Source: National Renal Transplant Centre Beaumont Hospital

Kidney Transplant Waiting List 2018 – 2022

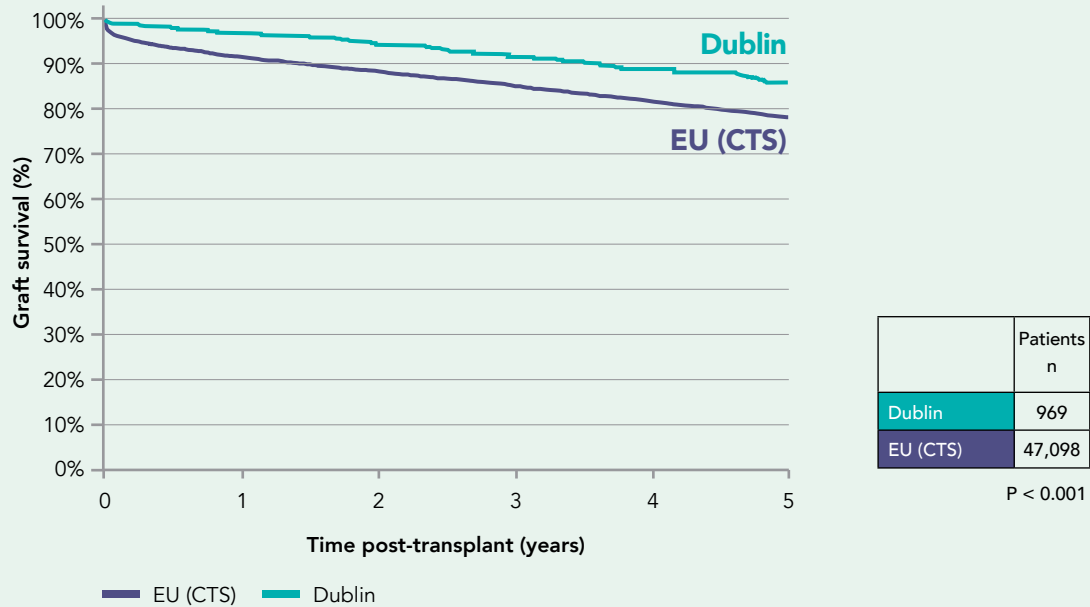
Figure 9: Kidney Transplant Waiting List 2018 – 2022



Source: National Renal Transplant Centre Beaumont Hospital

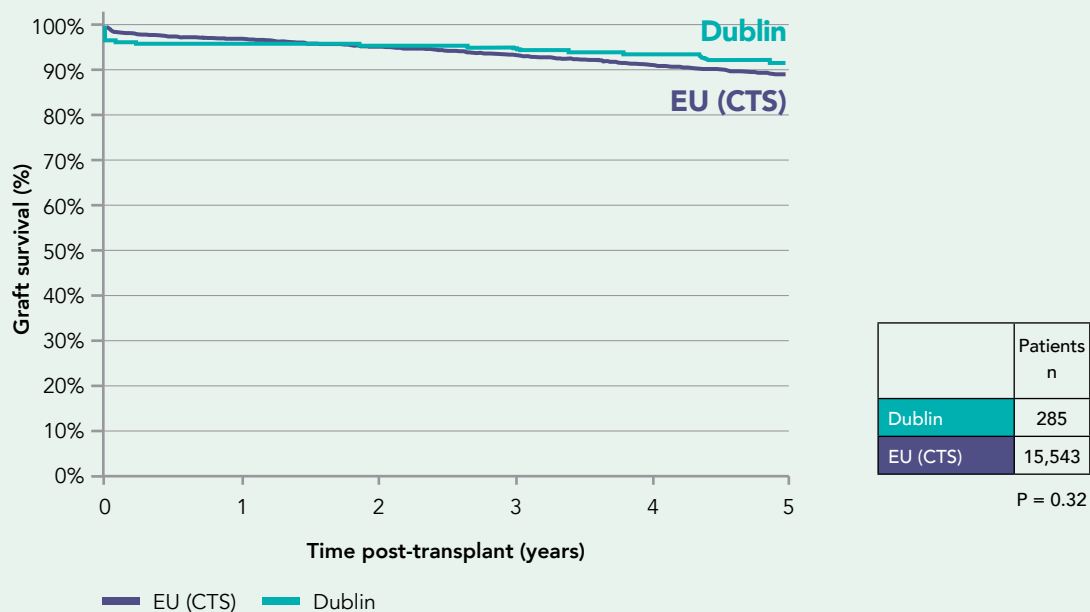
First Adult Kidney Only Transplants 2012 – 2021

Figure 10: First Adult Kidney Only Transplants 2012 - 2021 Deceased Donor



Source: Beaumont Hospital (Collaborative Transplant Study (CTS) Heidelberg)

Figure 11: First Adult Only Kidney Transplants 2012 - 2021 Living Donor



Source: Beaumont Hospital (Collaborative Transplant Study (CTS) Heidelberg)

Survival Post Kidney Allograft Transplant

Figure 12: Adult First Deceased Donor Allograft 2012 – 2021

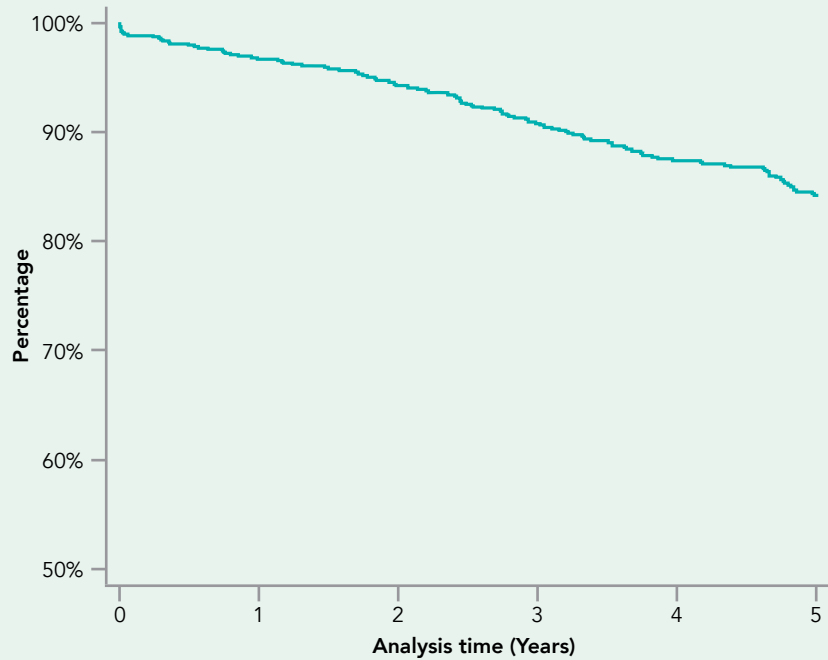
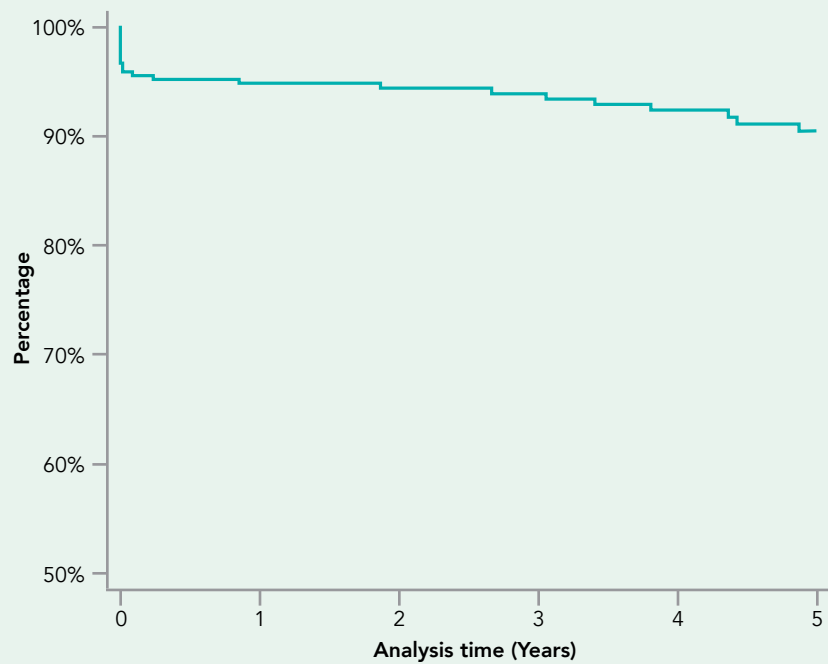


Figure 13: Adult First Living Donor Kidney Allograft Survival 2012–2021



<http://www.beaumont.ie/Kidneycentre-annualreport2022>

National Liver Transplant Service, St Vincent's University Hospital

The National Liver Transplant Programme commenced in January 1993, with the official opening taking place in October 1993 by Brendan Howlin, the then Minister for Health and Children. The programme has been running at St. Vincent's University Hospital since 1993 and has performed over 1,318 (as of Feb 2023) liver transplants to date.

The national centre, which serves patients from all over Ireland, is led by a multidisciplinary team of healthcare professionals with expertise in liver disease and liver surgery including transplantation. The comprehensive multidisciplinary approach to liver disease has resulted in an increased rate of referral of patients for consideration for liver transplantation – with success rates in line with the best results achieved in UK and European centres.

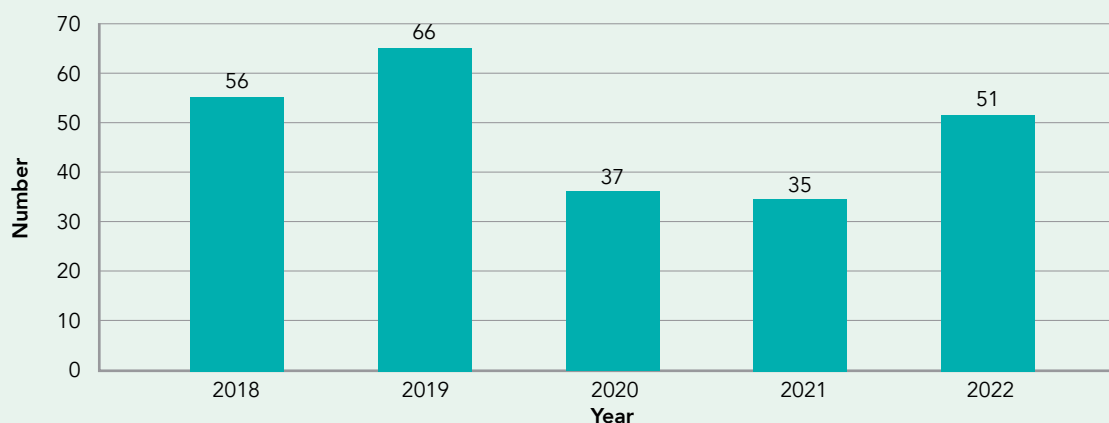
The COVID-19 pandemic impacted transplant numbers. The volume of patients receiving liver transplants in 2022 indicates that transplant activity is increasing back towards the rates of transplant prior to the COVID-19 pandemic.

Ms. Aoife Coffey
Transplant Coordinator
National Liver Transplant Service
St Vincent's University Hospital

Mr Emir Hoti
Consultant Hepatobiliary Liver Surgeon
National Liver Transplant Centre
St Vincent's University Hospital

Liver Transplants 2018 – 2022

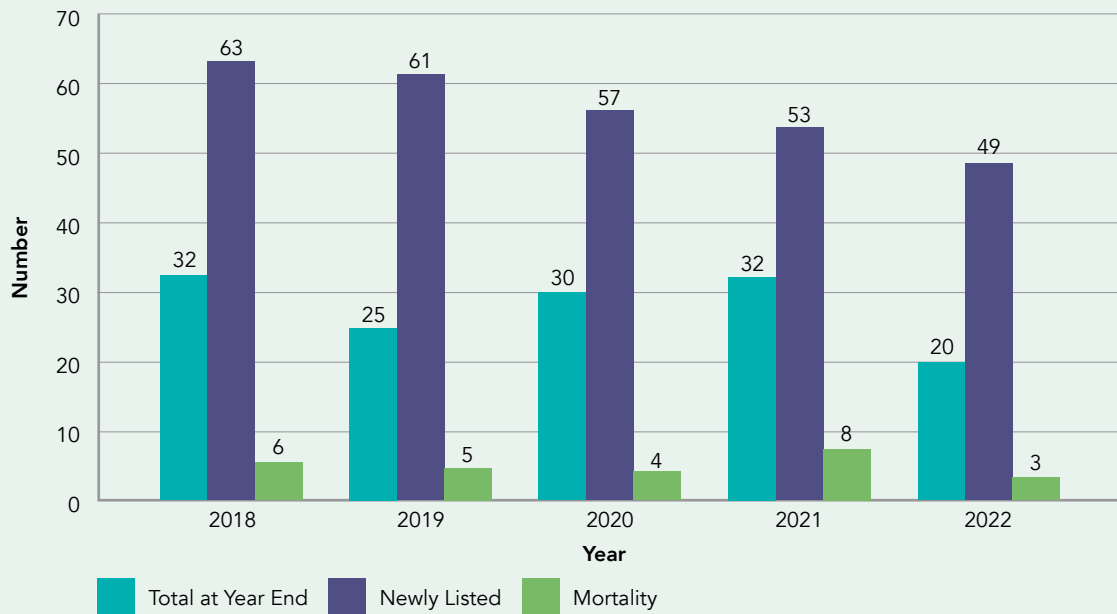
Figure 14: Liver Transplant 2018 – 2022



Source: National Liver Transplant Centre, St Vincent's University Hospital

Liver Transplant Waiting List 2018 – 2022

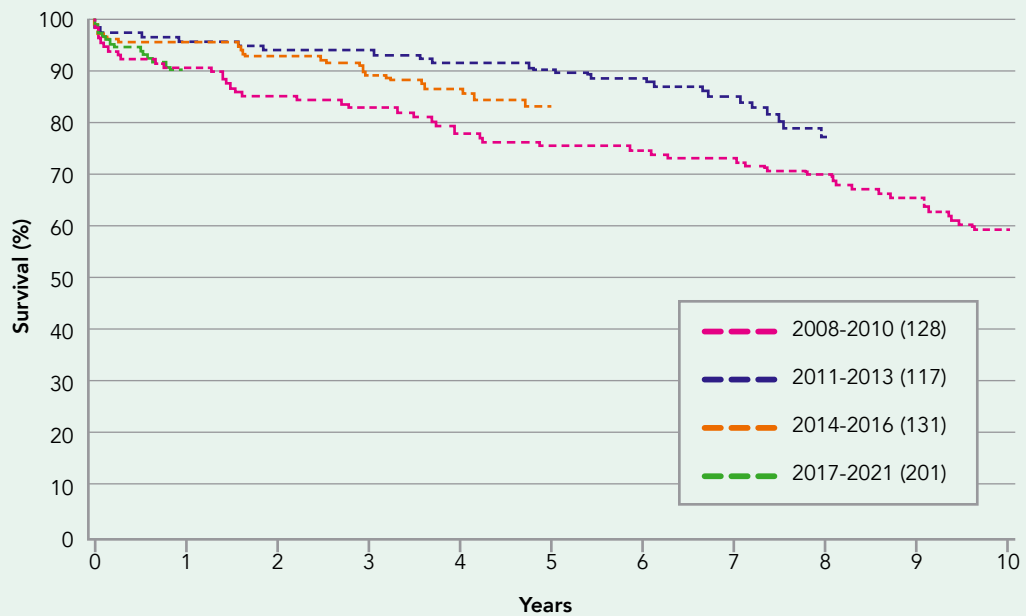
Figure 15: Liver Transplant Waiting List 2018 – 2022



Source: National Liver Transplant Centre, St Vincent's University Hospital

Survival Post Liver Transplant

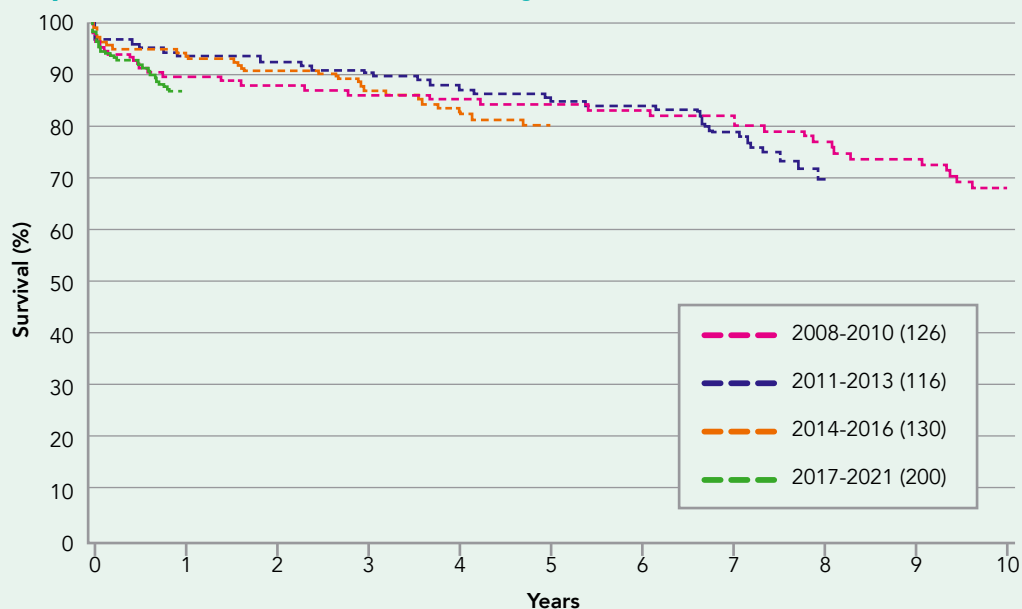
Figure 16: Long-term patient survival after first elective adult liver only transplants from DBD donors, 1 January 2008 – 31 December 2021



Source: National Liver Transplant Centre, St Vincent's University Hospital

Graft Survival Post Liver Transplant

Figure 17: Long-term graft survival after first elective adult liver only transplants from DBD donors, 1 January 2008 – 31 December 2021



Source: National Liver Transplant Centre, St Vincent's University Hospital

Table 3 shows patient and graft survival estimates, respectively, at one, two, five and ten years post-transplant.

Table 3: Patient survival after first elective adult liver only transplant from a DBD 1 January 2008 - 31 December 2021

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval)			
		One year 0.1761	Two year 0.0285	Five year 0.0077	Ten year
2008-2010	128	91 (85-95)	85 (78-90)	75 (67-82)	59 (50-67)
2011-2013	117	96 (90-98)	94 (88-97)	90 (83-95)	
2014-2016	131	95 (90-98)	93 (87-96)	83 (75-89)	
2017-2021	201	90 (84-94)			

National Pancreas Transplant Service, St Vincent's University Hospital

Pancreas transplantation is a highly specialised procedure that was first performed in the USA in 1966 with the objective of replacing the need for insulin therapy in people with Type 1 Diabetes Mellitus (T1DM).

Since then, simultaneous pancreas-kidney (SPK) transplantation has evolved both technically, and with the development of new immunosuppressive therapy. This therapy is now widely accepted as an optimal therapeutic option for highly selected patients with type 1 diabetes mellitus (T1DM) and end-stage renal disease.

Pancreas Transplantation started in Ireland in 1992 in Beaumont Hospital. Over the time period from 1992 – 2014 147 pancreas transplants were carried out. Most of these were simultaneous pancreas and kidney transplants (SPK) but a small number were pancreas after kidney (PAK) or pancreas transplants alone (PTA).

In 2016 St Vincent's University Hospital (SVUH) was established as the new home of the National Pancreas Transplant Programme. The surgical teams from Beaumont Hospital and SVUH work closely together, in SVUH, to carry out the SPK transplants.

The programme starts with the referral of the potential recipient by their local nephrology or endocrinology team and follows through assessment and decision making to listing and waiting for a suitable organ, transplantation and post-operative follow up.

SVUH provides a Consultant led Pancreas Transplant Service for those patients with Type 1 Diabetes. Mr Tom Gallagher, Dr John Holian and Dr Aisling O'Riordan have taken the lead in the service. Patients who require a simultaneous pancreas and kidney transplant are cared for in SVUH by a multi-disciplinary team which combines the expertise of the surgical team and nephrologists in SVUH with the renal transplant team from Beaumont Hospital.

To date more than 80 patients have been referred for consideration for pancreas and kidney transplant. Almost two-thirds of these have been presented and listed for simultaneous pancreas

and kidney transplant with the remainder being considered for kidney transplant alone or pancreas after kidney transplant. The majority of patients are under 50 years of age and have been referred from all over the country. All patients being listed for transplant attend a patient information and consent day with their family members or support person. This contributes to the formal and informal educational opportunities provided to this client group, in order that they gain a clear understanding of pancreas and kidney transplant, including the potential risks and benefits and the role they need to play to support their care and empower their decision making. A procedure specific consent form is used to document their decisions in consultation with the transplant team.

While on the waiting list patients are managed in their local referral unit with an annual review in SVUH. However, patients are contacted on a regular basis by phone to maintain an up to date record of their condition and complications and the transplant team liaises closely with the referring team.

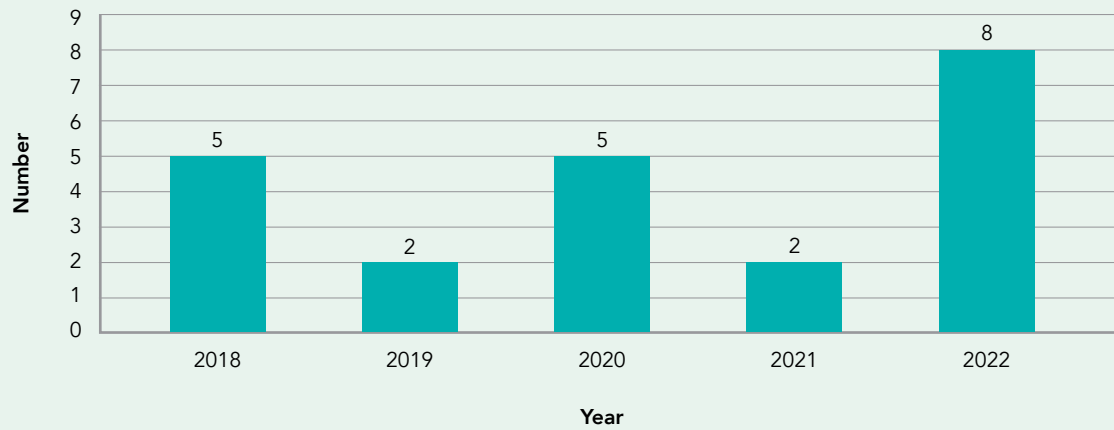
Up to the present time 25 simultaneous pancreas and kidney transplants have been carried out at SVUH. Two Pancreas after kidney transplants were also carried out in 2020. As the programme continues to grow in SVUH we hope to increase the yearly transplant numbers. This can only be achieved through awareness and with the continued selfless generosity of donors and donor families to whom we are so grateful.

Ms Caroline Doyle
Transplant Coordinator
National Pancreas Transplant Service
St Vincent's University Hospital

Mr Tom Gallagher
Hepato-Pancreato-Biliary &
Liver Transplant Surgeon
Pancreas Transplant Centre
St Vincent's University Hospital

Pancreas Transplants 2018 – 2022

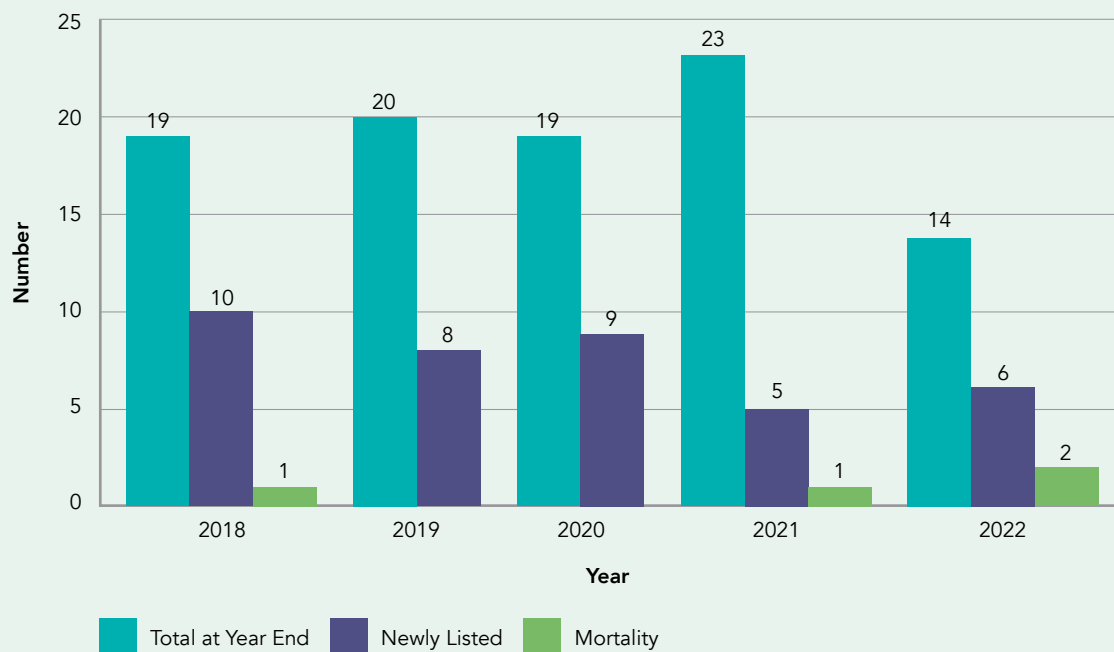
Figure 18: Pancreas Transplants 2018 – 2022



Source: National Pancreas Transplant Centre, St Vincent's University Hospital

Pancreas Transplant Waiting List 2018 – 2022

Figure 19: Pancreas Transplant Waiting List 2018 – 2022



Source: National Pancreas Transplant Centre, St Vincent's University Hospital

National Heart and Lung Transplant Service: Mater Misericordiae University Hospital

Mater Misericordiae University Hospital is the home for heart & lung transplantation in Ireland as well as cardiac assist devices and ECMO. The first heart transplant in Ireland was performed in 1985, the first lung transplant in 2005. By the end of 2022 the unit performed 426 heart and 341 lung transplants, this includes five Heart & lung, one Heart & Liver and one Lung & Liver transplant. The first cardiac assist device was performed in 2005, and so far 54 assist devices have been implanted, 21 have successfully gone to have heart transplant.

Thoracic organ transplantation has faced constant challenges; donors and recipients have become older and more complex. We have pushed the boundaries of organ utilization and recipient selection. Marginal donors are being used successfully in increasing numbers, these donors are older and the organ function is considered marginal at the time of offer.

Several positive steps were taken in 2022 to increase organ utilization, for lungs the use of EVLP to assess marginal lungs and especially those from DCD donors has increased steadily. Together with ODTI protocols are now in place to use organs from hepatitis C and other high risk donors.

Heart transplant and ventricular assist devices increase survival and quality of life in carefully

selected heart failure patients, and our goal is to work closer with our cardiology colleagues to build up appropriate cases in order to offer these effective treatments to ever increasing number of heart failure patients.

We intent to expand the use of EVLP especially in DCD donation. Organ Care System for heart transplant is going to be another future development in our unit, allowing establishment of DCD heart program.

The transplant unit in MMUH has come a long way since 1985, still a lot of work lies ahead. We are all working together to achieve the best outcome for our patients. I particularly thank our generous organ donors and their families without whom none of this could have been possible.

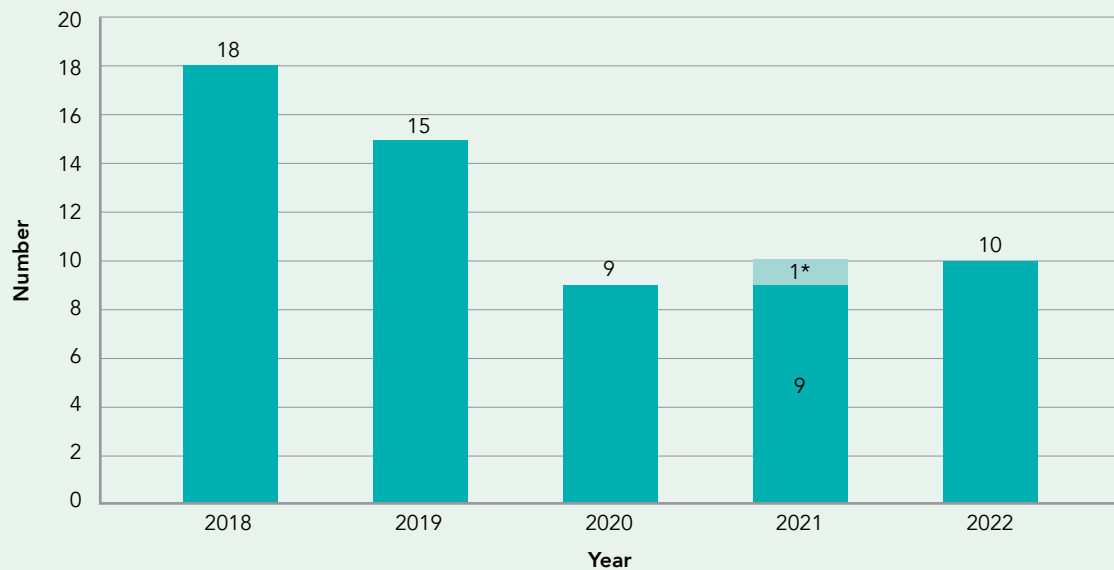
Sincerely



Mr Seyed Hossein Javadpour
Consultant Cardiothoracic Surgeon
Responsible Person
Head of the National Heart and Lung Transplant Centre

Heart Transplants 2018 – 2022

Figure 20: Heart Transplants 2018 – 2022

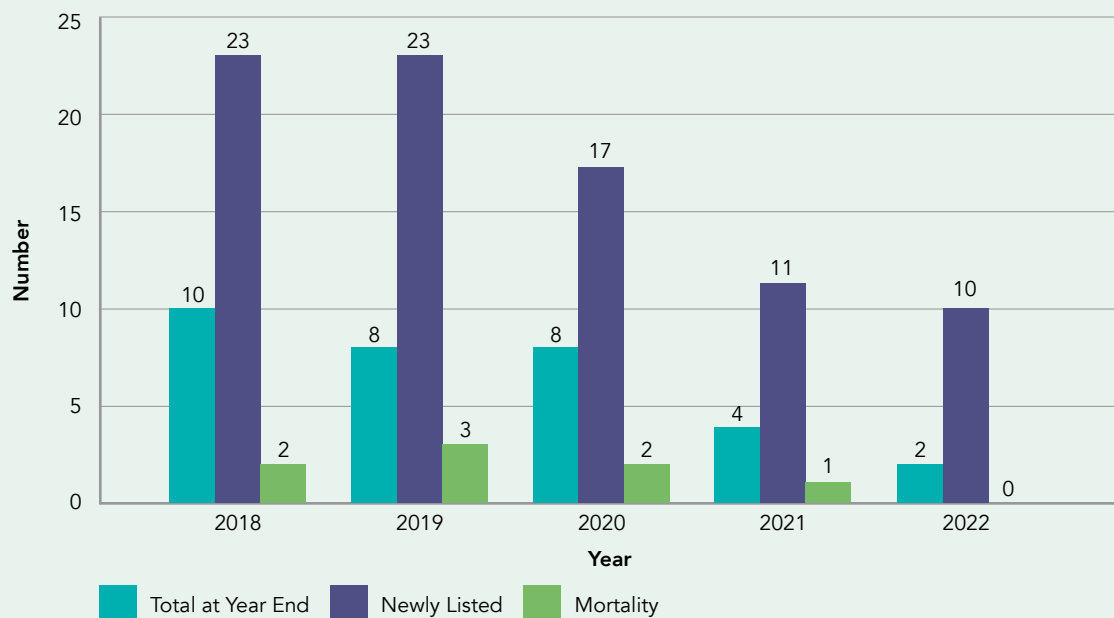


*CHI Crumlin

Source: National Heart and Lung Transplant Centre, Mater Misericordiae University Hospital

Heart Transplant Waiting List 2018 – 2022

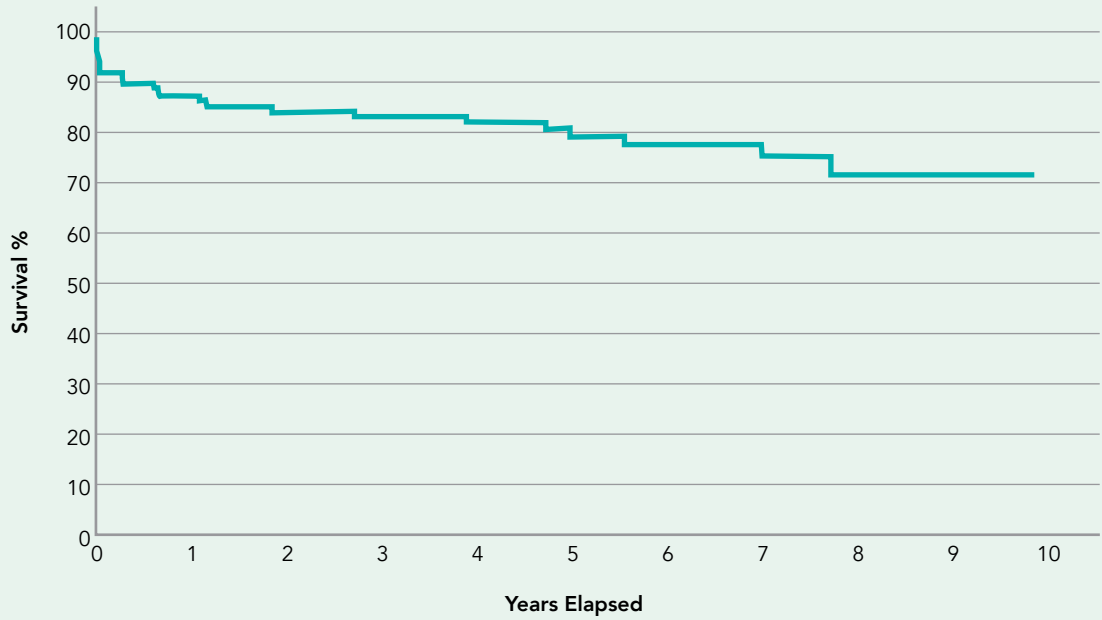
Figure 21: Heart Transplant Waiting List 2018 – 2022



Source: National Heart and Lung Transplant Centre, Mater Misericordiae University Hospital

Survival Post Heart Transplantation

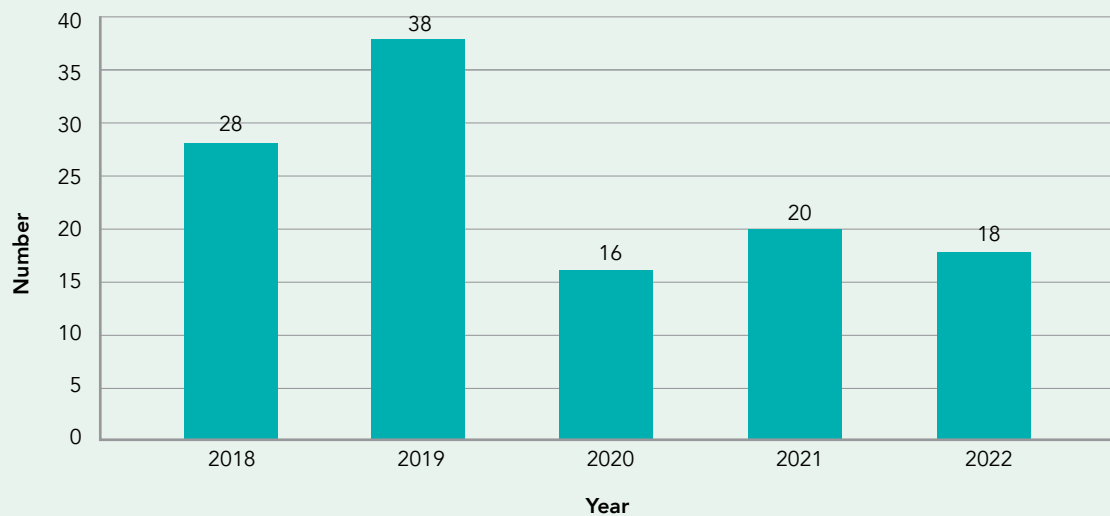
Figure 22: Survival Post Cardiac Transplant



Source: The National Heart and Lung Transplant Centre, Mater Misericordiae University Hospital

Lung Transplants 2018 – 2022

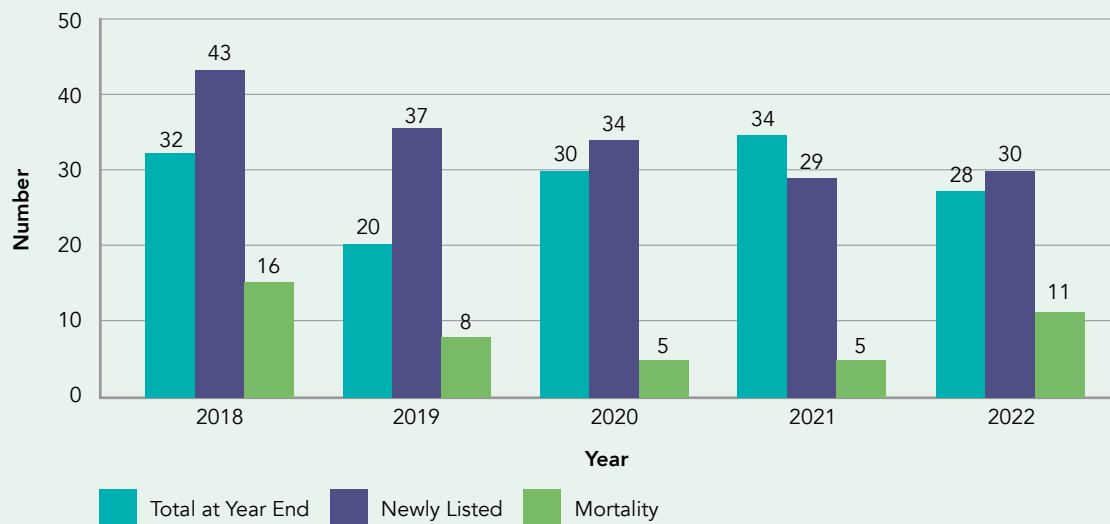
Figure 23: Lung Transplants 2018 – 2022



Source: National Heart and Lung Transplant Centre, Mater Misericordiae University Hospital

Lung Transplant Waiting List 2018 – 2022

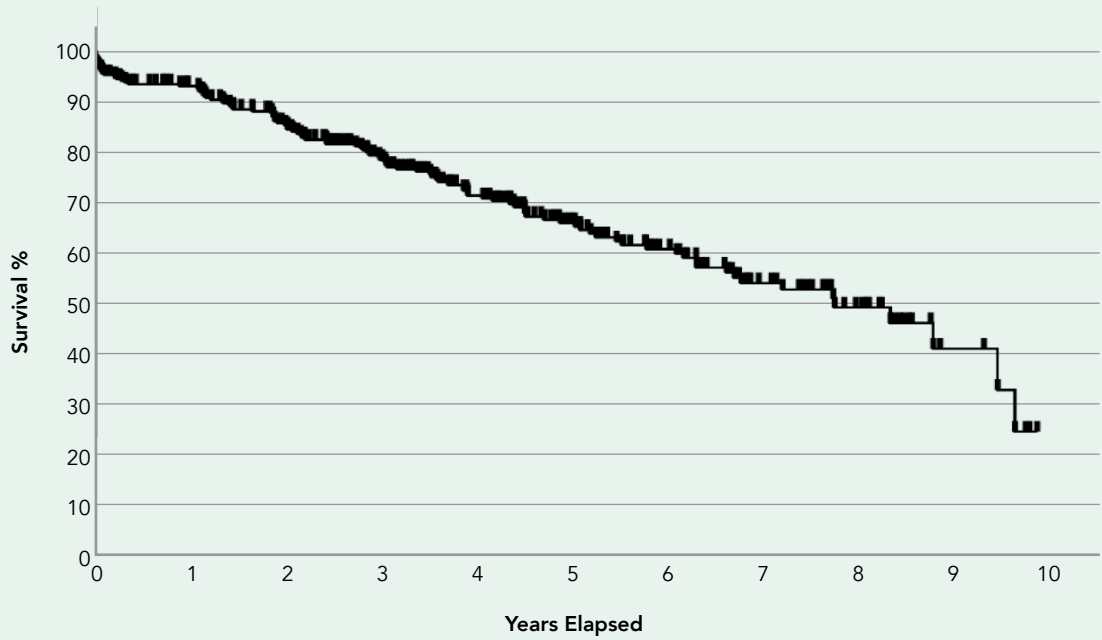
Figure 24: Lung Transplant Waiting List 2018 – 2022



Source: National Heart and Lung Transplant Centre, Mater Misericordiae University Hospital

Survival Post Lung Transplantation

Figure 25: Survival Post Lung Transplant (January 2012 - December 2021)

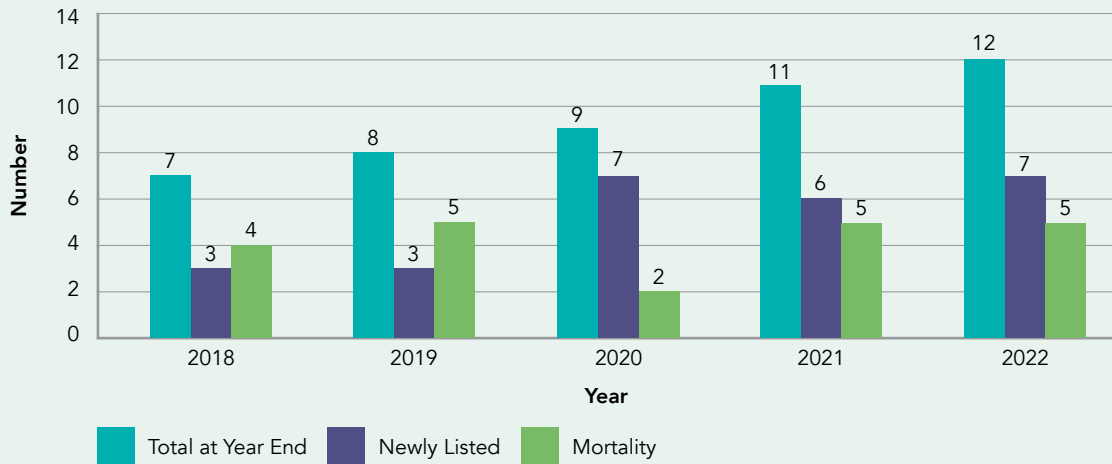


Source: The National Heart and Lung Transplant Centre, Mater Misericordiae University Hospital

Paediatric Transplant Activity

Paediatric Kidney Transplant 2018 – 2022

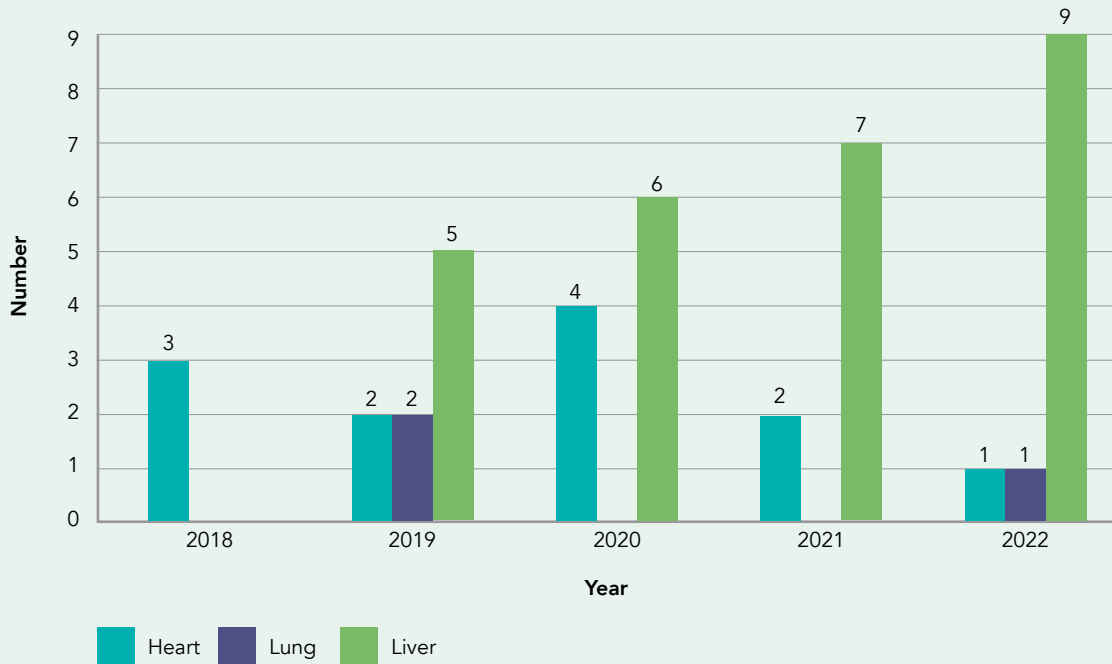
Figure 26: Paediatric Kidney Transplant (<19yrs at time of transplant) 2018 – 2022



Source: National Renal Transplant Centre, Beaumont Hospital

Irish Paediatric Transplants performed in the UK

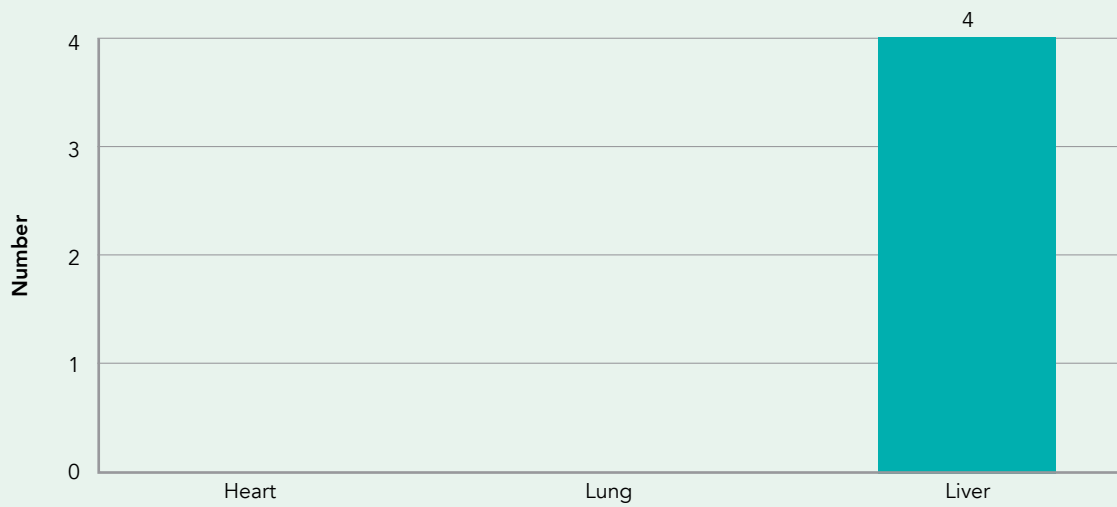
Figure 27: Irish Paediatric Transplants performed in the UK 2018 – 2022



Source: CHI Crumlin, HSE Cystic Fibrosis Centres

Irish Paediatric waiting List UK End of December 2022

Figure 28: Irish paediatric waiting list in the UK End Of December



Source: CHI Crumlin, HSE Cystic Fibrosis Centres

Quality and Safety

ODTI Quality

Post the successful continuous improvement program and quality system development for the National Organ Procurement Service (NOPS) function in 2021, ODTI have engaged a Director of Quality to develop and implement a quality strategy for ODTI as part of the ongoing organisation development. This strategy was completed in Q4 of 2022 and will be part of the overall organisation redevelopment planned for mid-2023.

In Quarter 4 2022, appointment of Quality and Biovigilance Manager for ODTI, was approved. The Quality and Biovigilance Manager will play a key role in the further development of the ODTI Biovigilance function as the National Competent Authority with the Health Products Regulatory Authority (HPRA) for Organ Transplantation in Ireland. Further to this the Quality and Biovigilance Manager will lead the implementation of the quality strategy over the next 3 years in conjunction with the Director of Quality.

NOPS Quality

Quality is a fundamental pillar of Organ Donation and Transplant Ireland's (ODTI) mission to provide safe and effective organ donation and transplant services. We are committed to ensuring the highest standards of quality throughout our processes, from the referral of potential donors to the allocation of organs to transplant centres. Our dedicated team of professionals works tirelessly to ensure that every step of the process meets or exceeds the regulatory requirements. We strive for continuous improvement and invest in innovative technologies and training programs to enhance our capabilities and deliver the best possible outcomes.

Continuous Improvement

Continuous improvement is at the heart of ODTI's mission of increasing the number of organs available for transplant. Our commitment to excellence drives us to continually evaluate and improve our processes, systems, and outcomes. Throughout the past year, we have continued to work with organ donation personnel and transplant teams to enhance our ability to characterise potential donors, facilitate the donation process, and ensure the best possible outcomes. We have also worked to optimise our communication and collaboration with hospitals, transplant centers, and other stakeholders. As

we look ahead, we remain dedicated to pursuing ongoing improvement in all aspects of our work to better serve those in need of life-saving organ transplants.

NOPS Quality Review

NOPS quality reviews are conducted by the NOPS quality manager on a bi-annual basis and are an essential part of ensuring that NOPS provide high-quality services that support the critical mission of saving and improving lives through organ donation and transplantation.

The quality review also examines key performance indicators, such as non-conformance rates, change control requests, retrospective information sent and complaints received per donation. The goal of the review is to identify areas for improvement and to promote best practices in organ donation.

NOPS encourages a culture of incident reporting, this is key to identifying possible risks in work processes and highlight opportunities for improvement. All incidents reported are logged in the Quality Management System (QMS) and where necessary a corrective and preventative action is taken.

Figure 29 demonstrates the quality activities over the previous 5 years.

Change Control is the management of any change to the process, material, equipment and facilities that may impact the quality and safety of organs. This should be reflected in documentation and where relevant, written procedures and managed through the QMS. There were 38 change controls raised in 2022, which were raised to facilitate continuous improvement actions.

NOPS continue to develop the QMS in line with best international practice in the area of organ procurement licensed through the HPRA. Non-conformance includes deviations, incidents, accidents, and Serious Adverse Reactions and Events (SAR/Es). The total number of non-conformances raised during 2022 was 84. This can be attributed to the encouragement that is being given to reporting of incidents to the QMS.

The Complaint System processed 19 complaints in 2022 from external and internal sources covering issues with the process. All complaints were investigated with follow up and associated corrective and preventative actions (CAPA) were taken.

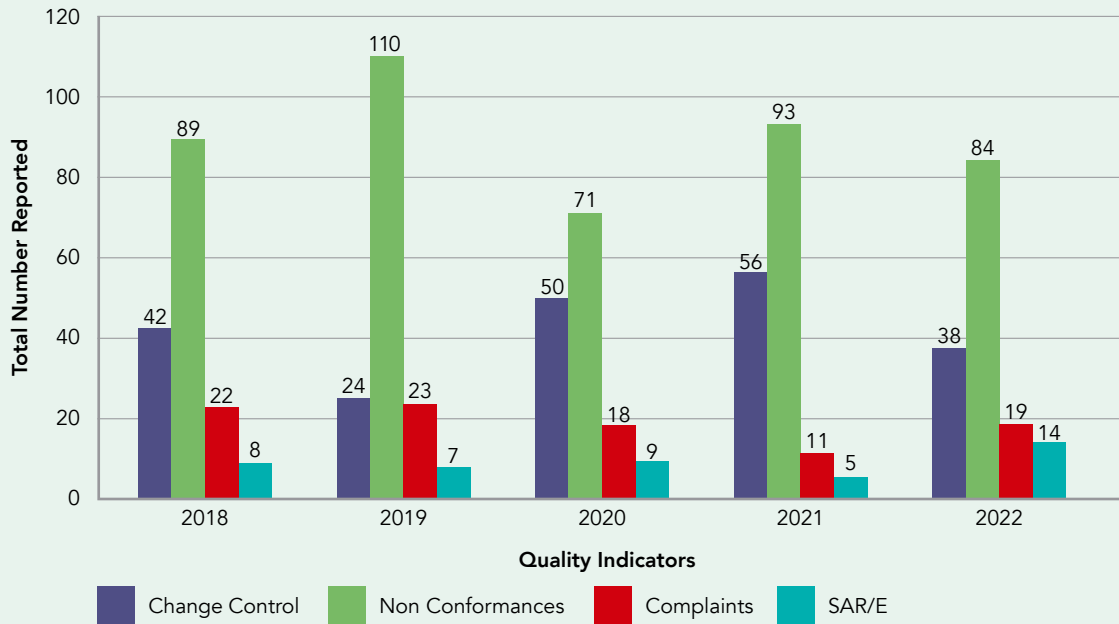
Ongoing analysis of complaints, non-conformances and tracking events are completed throughout the year to ensure that Serious Adverse Events (SAEs) and Serious Adverse Reactions (SARs) are captured and analysed. There were 14 SAEs reported to the HPRA and ODTI from NOPS during 2022.

In 2022, internal and external audits took place according to the annual audit plan, which has

been approved by the responsible person for NOPS. All findings were reported and registered for follow-up actions and activities.

Pursuing our aim to develop the QMS in line with international standards, 2023 will see the move towards the introduction of Qpulse, a Document Management System. This will allow us to improve our processes even further.

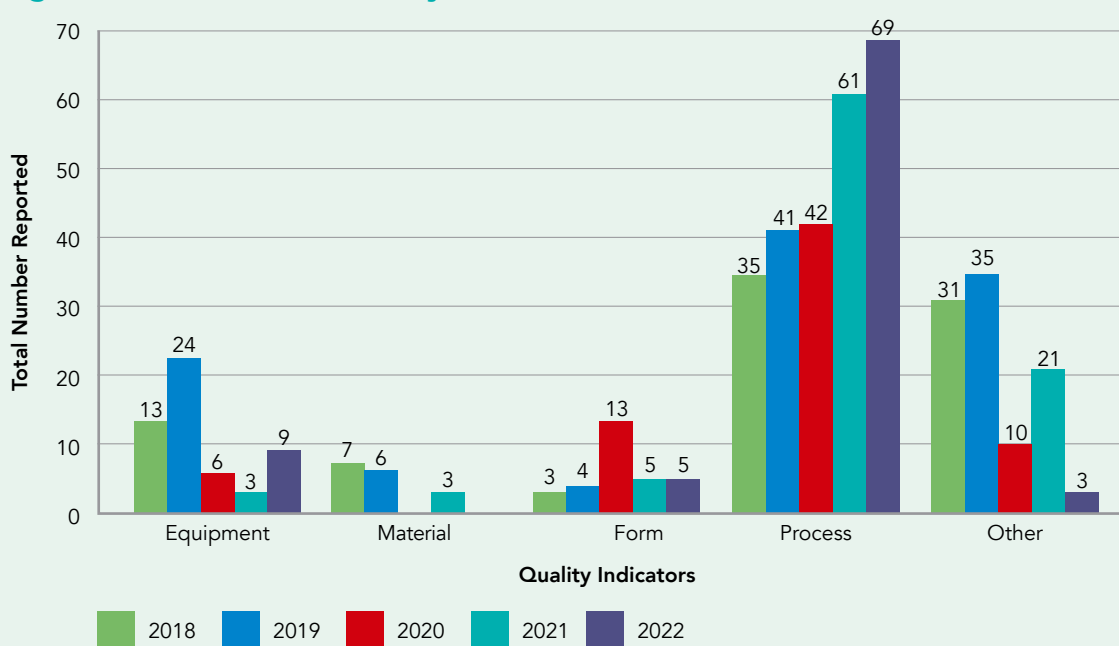
Figure 29: Quality and Safety Review 2018 – 2022



Source: Organ Donation Transplant Ireland QMS

SAR/E: Serious Adverse Reaction/Event

Figure 30: Non-conformance by cause



Acknowledgements

Acknowledgment is necessary to the continued support of the ODTI team, inclusive of National Organ Procurement Service (NOPS), Organ Donor Nurse Managers (ODNM), Clinical Leads in Organ Donation (CLOD) and administrative support staff who work collectively to ensure the smooth delivery of the service.

National Organ Donation and Transplant Advisory Group (NODTAG)

NODTAG is the clinical advisory group to the ODTI which provides governance, recommendations and sets direction for the office. NODTAG comprises the following members.

Mr. Patrick Creedon

Principal Officer,
Department of Health

Mr Andrew Conlon

Principal Officer (April onwards),
Department of Health

Professor Jim Egan

Director Organ Donation Transplant Ireland
Chair NODTAG

Ms. Angela Fitzgerald

Assistant National Director,
Acute Hospital Division, HSE

Mr Robert Kidd

Assistant National Director (March onwards),
Acute Hospital Division, HSE

Dr. Alan Gaffney

Clinical Lead in Organ Donation,
Beaumont Hospital,
RCSI Hospital Group

Ms. Martina Goggin

Patient & Public Interest Representative

Mr. Emir Hoti

Consultant Hepatobiliary Liver Transplant Surgeon
National Liver Transplant Centre
St Vincent's University Hospital

Mr. Hossein Javadpour

Consultant Cardiothoracic Surgeon
National Heart and Lung Transplant Centre
Mater Misericordiae University Hospital

Professor Mary Keogan

Consultant Immunologist
Beaumont Hospital

Ms. Dilly Little

Consultant Renal Transplant Surgeon
National Renal Transplant Centre
Beaumont Hospital

Dr. Catherine Motherway

Clinical Lead in Organ Donation
University Hospital Limerick

Dr Colm Magee

Consultant Nephrologist
Beaumont Hospital

Dr Carol Traynor

Consultant Nephrologist (October onwards),
Beaumont Hospital

Professor Ross Mc Nicholas

Consultant Gastroenterologist,
St Vincent's University Hospital

Dr Brian O'Brien

Deputy Clinical Director, ODTI
Cork University Hospital

Dr. James O'Rourke

Consultant Intensivist
Beaumont Hospital

Mr John Walsh

Chief Operations Officer
ODTI

National Organ Procurement Service

Prof Jim Egan, Responsible Person
Emma Corrigan, Donor Coordinator
Lynn Martin, Donor Coordinator
Jean O'Reilly, Donor Coordinator
Brenda Poole, Donor Coordinator
Elaine Pierce-Kelly, Donor Coordinator (May 2022)
Breeda Conlon, Donor Coordinator
Eimear Shields, Donor Coordinator
Claire Dalton, Donor Coordinator (August onwards)
Dominic Lozanes, Donor Coordinator
Eimear Dempsey, Donor Coordinator (December onwards)
Kathleen Tyrrell, Senior Administrator

Clinical Leads in Organ Donation

Dr. Emer Curran, Saolta Hospital Group
Dr. Ian Conrick-Martin, Ireland East Hospital Group
Dr. Alan Gaffney, RCSI Hospital Group
Prof. Ignacio Martin-Loeches, Dublin/Midlands Hospital Group
Dr. Catherine Motherway, University of Limerick Hospital
Dr. Adrian Murphy, South/South West Hospital Group

Organ Donation Nurse Managers

Bernie Nohilly, University of Limerick Hospital Group
Breda Doyle, South/South West Hospital Group
Gillian Shanahan, Saolta University Hospital Group
Karen Healy, RCSI Hospital Group
Nikki Phillips, Dublin/Midlands Hospital Group
Orla Craddock, Ireland East Hospital Group

Quality Team

Paul Hendrick, Quality and Compliance Consultant
Hilary Barry, NOPS Quality Manager
Leah Campbell, Transplant Centre Quality Manager, (SVUH)
Sinead Cronnolly, Transplant Centre Quality Manager, (Beaumont)
Edel Ward, Transplant Centre Quality Manager (MMUH)

ODTI Operations and Administration Support

Prof Jim Egan, Director ODTI
Dr Brian O'Brien, Deputy Clinical Director
John Walsh, Chief Operations Officer
Kathleen Tyrrell, Senior Administrator
Tara Maguire, Administration Business Lead
Dara Kelly, System Administration Manager
Steven Kawala, Data and Quality Management Administrator
Edel Brennan, System Administrator Management
Caoimhe Flynn, Data and Quality Administrator

Medical Clinical on Call

Prof Jim Egan
Dr James O'Rourke
Dr Brian O'Brien
Dr Catherine Motherway

Bibliography

- S.I No: 158 of 2006, European Communities (Quality and Safety of Human Tissues and Cells) Regulations 2006.

- S.I. No: 598 of 2007, European Communities (Human Tissues and Cells Traceability Requirements, Notification of Serious Adverse Reactions and Events and Certain Technical Requirements) Regulations 2007.

- S.I. No: 325 of 2012, European Union (Quality and Safety of Human Organs Intended For Transplantation)

- Directive 2004/23/EC of the European Parliament and of the Council of 31 March 2004 setting standards of quality and safety for the donation, procurement, testing, processing, preservation, storage and distribution of human tissues and cells.

- Commission Directive 2006/12/EC of 8 February 2006 implementing Directive 2004/23/EC of the European Community and of the Parliament as regards certain technical requirements for the donation, procurement and testing of human tissues and cells.

- Commission Directive 2006/86/EC of 24 October 2006 implementing Directive 2004/23/EC of the European Community and of the Parliament as regards traceability requirements, notification of serious adverse reactions and events and certain technical requirements for the coding, processing, preservation, storage and distribution of human tissues and cells.

- Commission Directive 2010/53/EC of 7 July 2010 of the European Parliament and the Council of the European Union on standards of quality and safety of human organs intended for transplantation.

- ODTI, A Framework for Quality and Safety of Human Organs Intended for Transplantation (2014).

Organ Donation and Transplant Ireland

Ground Floor, Bridgewater House, Bridgewater Business Centre,
Conyngham Road, Islandbridge, Dublin 8 D08 T9NH

Email: odti@hse.ie • **Website:** www.hse.ie/odti

ODTI-RPT-001/22 Annual Report, Rev 0