



odti

Deonú agus Trasphlandú Orgán Éireann
Organ Donation Transplant Ireland

**Organ
Donation
Transplant
Ireland**

2021
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.

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Director's Statement

Organ donation saves lives

2021 witnessed the devastating impact COVID 19 had on organ donation and transplantation services. Regrettably, in a European context, Ireland fared poorly when compared with peer European countries in relation to rates of transplantation during the COVID 19 pandemic. Compared to 2019, when benchmarked against other European countries, Ireland had a 27% reduction in donation rates (European Median 15%), and a 28% reduction in transplant rates (European median 19%). This data is summarised in Figures 29 – 34.

Consequently COVID 19, which is an extreme example of unscheduled care pressures on acute hospital services, demonstrated the fragile environment in which transplant services exist in Ireland. Prior to COVID 19, Ireland performed at an average level in terms of transplant rates in comparison to other European countries. The current model in Ireland whereby transplant services operate in acute general hospitals and compete for beds, theatre capacity and intensive care beds, underpins the reason why transplantation suffered so adversely during the pandemic. In particular this was brought into sharp focus by the "Never Event" during 2021 when a lung transplant failed to progress following a donation episode because of the lack of ICU bed availability.

As of year-end 2021, the Human Tissue Bill being drafted by the Department of Health has not yet been published. Consequently, Ireland remains unique, operating donation and transplant services without a National legislative framework. The absence

of the Human Tissue Bill results in Irish citizens who wish to become altruistic donors travelling to the UK to generously donate kidneys to a deserving stranger. Other jurisdictions are investing in organ donation because of the added value of lives saved and the cost effectiveness of transplantation relative to the expanding demands for support therapies such as haemodialysis. Attention needs to be given to the hospital environment and significant infrastructure deficits that organ donation and transplant services operate in.

Despite the fragile framework on which organ donation and transplant services operate, 65 families' generously donated their loved ones organs and 35 families' donated live kidneys through the living kidney program. This incredible generosity has saved the lives of 206 people, highlighting that organ donation saves lives. Included in the courageous families was our esteemed and much respected colleague Siobhan Brosnan, Organ Donor Nurse Manager at Limerick University Hospital, who lost her life unexpectedly in a road traffic accident. True to her principles, she saved lives by donating her organs. Ar dheis Dé go raibh a hanam

Yours sincerely,



Egan,
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
- Portiuncula 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

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

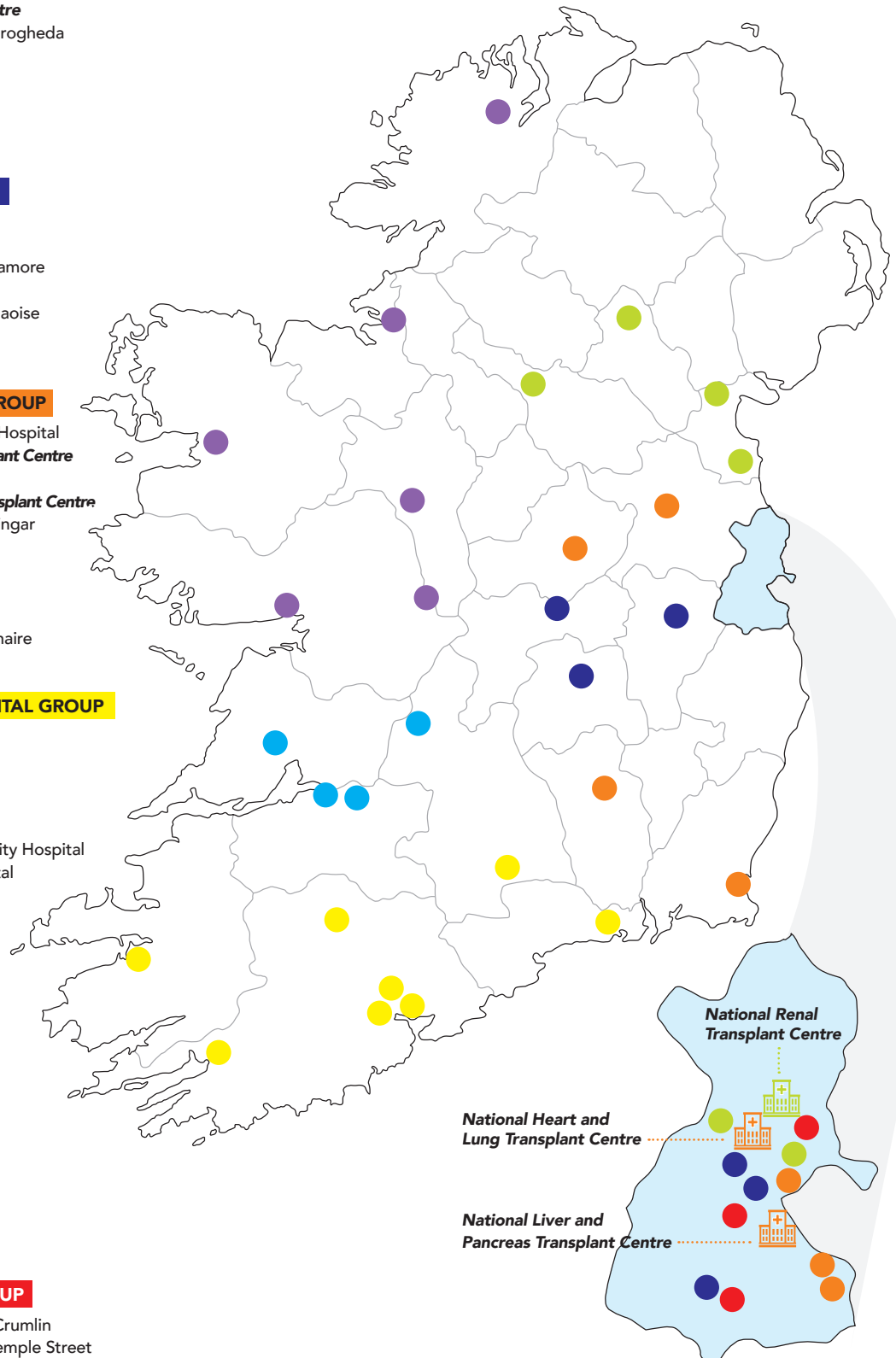


Table 1: Donation Activity per Hospital Group 2017 – 2021

RCSI Hospital Group					
Year	2017	2018	2019	2020	2021
Total	37	21	23	15	18

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	2017	2018	2019	2020	2021
Total	15	13	11	8	8

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

Ireland East Hospital Group					
Year	2017	2018	2019	2020	2021
Total	14	15	15	9	7

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	2017	2018	2019	2020	2021
Total	17	15	16	15	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	2017	2018	2019	2020	2021
Total	6	10	11	9	7

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

University of Limerick Hospital Group					
Year	2017	2018	2019	2020	2021
Total	5	6	7	6	4

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

Children's Hospital Group					
Year	2017	2018	2019	2020	2021
Total	5	1	2	1	1

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

National Yearly Total					
Year	2017	2018	2019	2020	2021
Total	99	81	85	63	65

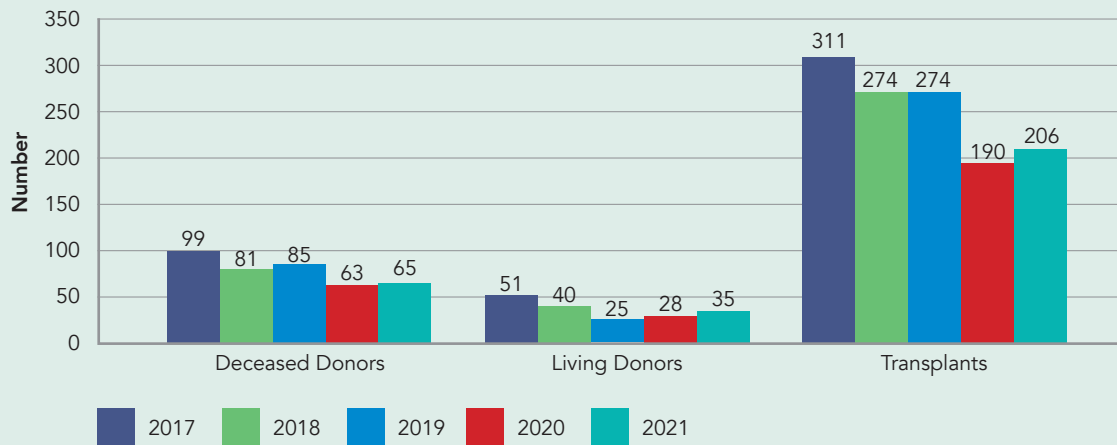
Organ Donation and Transplant Executive Summary 2017 – 2021

Table 2: Organ Donation and Transplant Summary 2017 – 2021

		2017	2018	2019	2020	2021	5 year total	5 year average
Donations		99	81	85	63	65	393	79
Transplants from Deceased Donations	Kidney	141	127	128	95	104	595	119
	Liver	62	56	66	37	35	256	51
	Lungs	36	28	38	16	20	138	28
	Heart	16	18	15	9	10	68	14
	Pancreas	5	5	2	5	2	19	4
Total		260	234	249	162	171	1076	215
Living Kidney Transplants		51	40	25	28	35	179	36
UK Paired Kidney Exchange/* 2 desensitise in UK		3	3	3	1	1	11	2
Living & Deceased Kidney Transplants		192	167	153	123	139	774	155
Total Organ Transplants (Not including UK paired exchange)/desensitised		311	274	274	190	206	1255	251

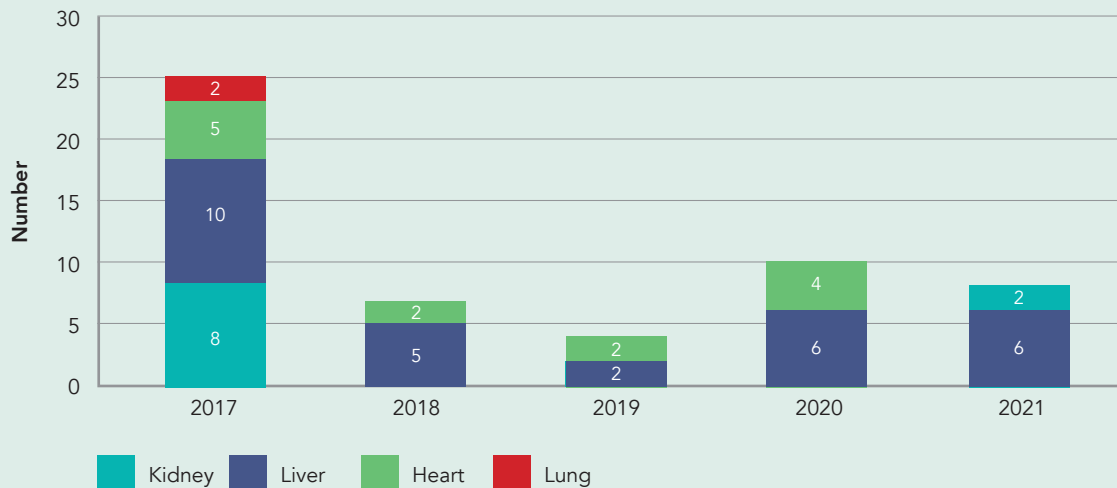
Total Organ Donations and Transplants

Figure 1: Total Organ Donations and Transplants 2017 – 2021



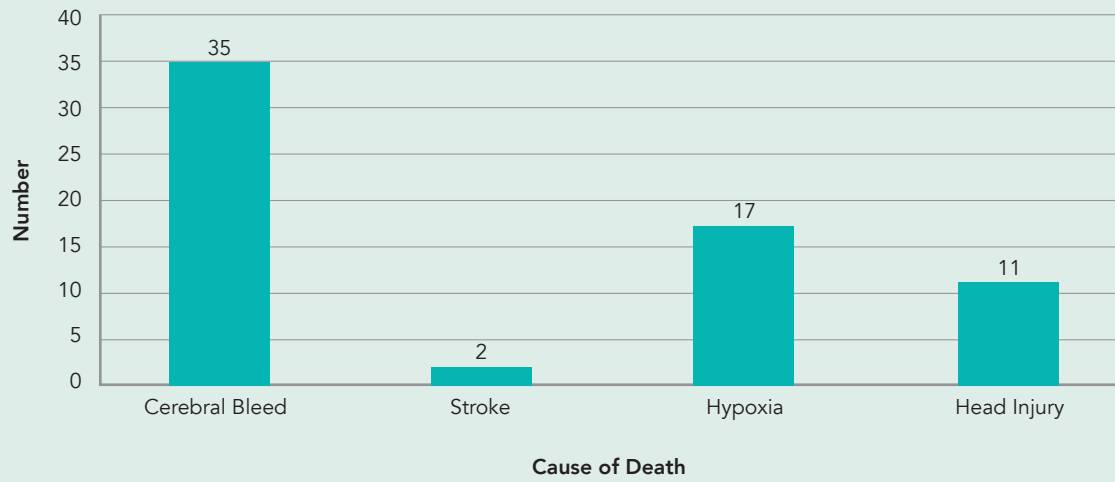
Not including UK** paired exchange or ** desensitised patients. **

Figure 2: Donated Organs Utilised Abroad



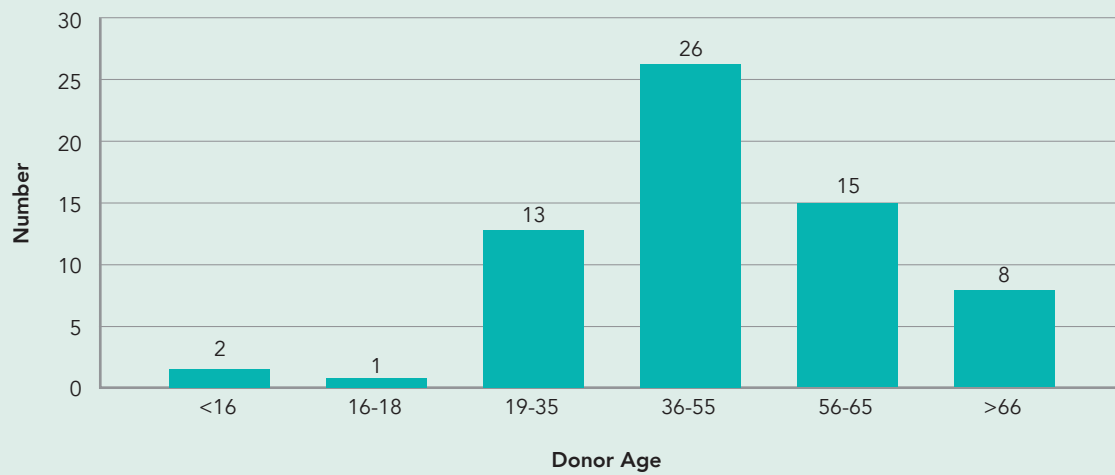
Cause of Death

Figure 3: Donor Cause of Death 2021



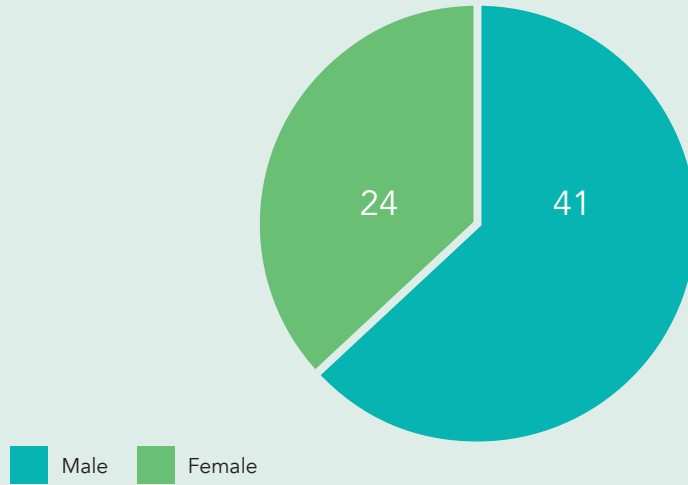
Deceased Donation

Figure 4: Donor Age 2021



Donor Gender

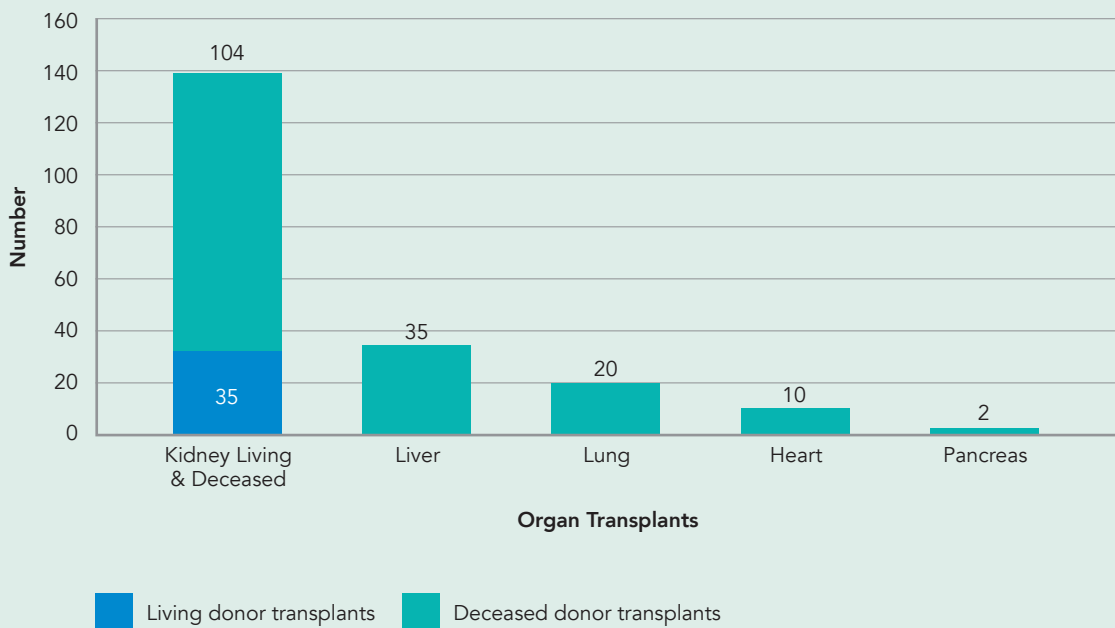
Figure 5: Deceased Donation Gender



Transplantation

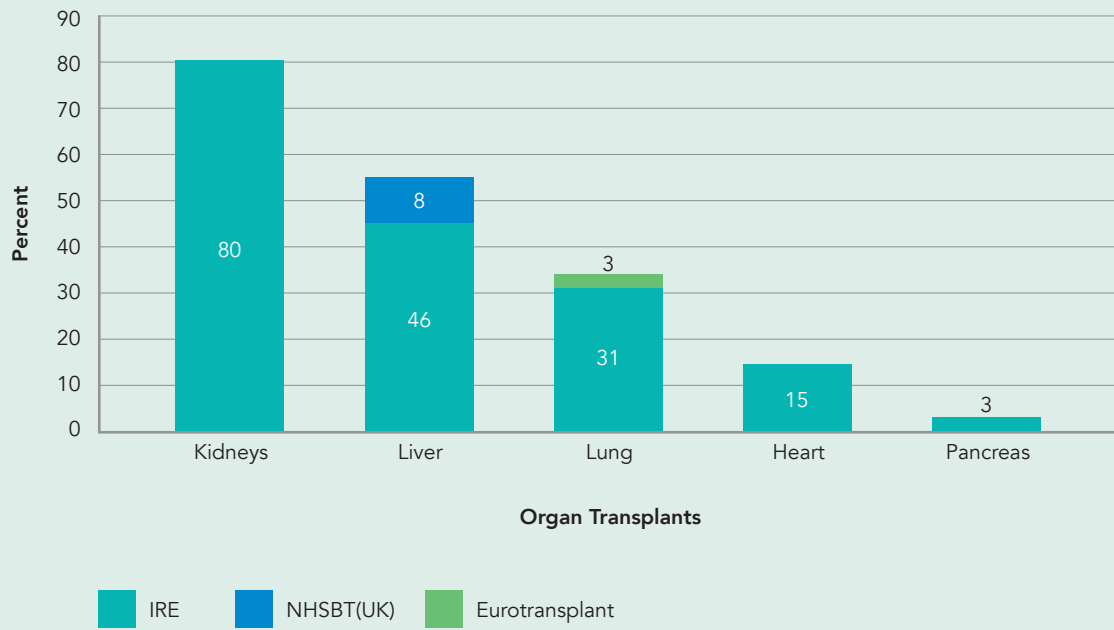
Organ Specific Activity 2021

Figure 6: Organ Transplant Specific Activity



*Not including UK paired exchange or desensitised patients.

Figure 7: Conversion Rates (%): Deceased Donor Offers to Transplant (n=65)



National Renal Transplant Service, Beaumont Hospital

Kidney Transplantation is the preferred treatment option for patients with end stage kidney disease (ESKD), offering improved survival and better quality of life. The COVID 19 pandemic has posed significant challenges for the safe delivery of kidney transplantation worldwide and the National Kidney Transplant Service in Ireland has experienced similar difficulties. These difficulties include the risk of severe infection and mortality in patients who are immunosuppressed post-transplant; reduced deceased donor activity due to the admission of COVID 19 positive patients to intensive care units; providing a safe Covid free environment for patients undergoing transplant surgery and ensuring the safety of living kidney donors and their recipients. Despite these significant challenges, the National Kidney Transplant Service continued to provide transplant services throughout 2021.

In 2021, we performed 139 kidney transplants, 104 of which were from deceased donors. In January and February 2021, there was a significant surge in the number of COVID 19 positive cases nationally, and due to the high community transmission rates of infection, living donor transplants were deferred pending the availability of COVID 19 vaccines for potential living donors and their recipients. This decision was taken to minimise the risk of overwhelming infection and mortality in potential living kidney donors and their recipients in the post-operative period. At the same time, in line with public health advice, all potential kidney recipients were prioritised for early COVID 19 vaccination. This risk stratification process has allowed 35 living donor transplants to proceed in 2021.

As ESKD is recognised as a risk factor for severe COVID 19 infection, all potential kidney recipients on the transplant waiting list were advised to avail of the COVID 19 vaccines 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. It is clear that 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. In

addition, in infected patients, necessary reduction in immunosuppression to allow them to recover adds additional risk of rejection of the kidney transplant. 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 been vaccinated. Despite a successful vaccine roll out, a fourth wave of infection was experienced nationally in October through to December 2021. A clinical risk stratification model was adopted following guidance from Organ Donation Transplant Ireland (ODTI) and the HSE to attempt to weigh the risk of proceeding with transplant versus the risk of infection with COVID 19 for each individual patient and also to minimize the transmission risk to other patients in the transplant department.

To reduce the risk of exposure and cross-infection after discharge from the 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 Sláintecare and has been extremely successful. This initiative won an Enterprise Ireland Health Technology Innovation Award for Integrated Health in November 2021.

Because of the requirement for augmented immunosuppression in newly transplanted "highly sensitised" recipients, these patients are especially at risk if they contract COVID 19 or other infection. We prioritise these patients on the transplant waiting list and in 2021 a total of 20 very highly sensitised patients (PGen \geq 95%) were transplanted, some of whom were on the transplant waiting list for more than 10 years. Stringent analysis of donor specific anti-body status pre-transplant resulted in these patients being transplanted with very limited need for the use of Anti-Thymocyte Globulin (ATG) induction.

There were 16 kidney transplants performed from non-heart beating deceased donors with 2 donor hospitals referring their first such donor.

In July 2021, we conducted a 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 the ODTI and was extremely well received by all attendees. We hope to run this course as an annual event.

The number of patients alive with a functioning kidney transplant remains stable at 2610. The number of patients listed on the transplant waiting list remained relatively stable with a total of 512 listed at the end of 2021. In 2021, 150 new patients were approved for listing to the pool - similar to 2020. However, the global shortage of organs relative to the number of patients waiting for transplant remains an ongoing challenge for the NKTS reflected by the median time of 25 months from listing to first transplant in 2021, a significant increase from 19 months in 2020.

Irish Kidney transplant outcome data continues to be excellent. The overall median adult allograft and patient survival for first deceased donor kidney transplant is 15.6 and 21.7 years respectively, representing a steady improvement since the 1980s. Based on the most recent data, Irish kidney transplant outcomes are excellent with adult first deceased one year allograft survival of 97% and patient survival 98%.

We continue to benchmark our data against the European Collaborative Transplant Study (CTS) and our outcome data exceeds the CTS means for all groups. Patients undergoing repeated transplants of 3rd or 4th kidney transplants in Dublin have outcome data that exceeds the CTS data in all time points. Currently, 19 patients have a functioning kidney 40 years or more after their transplant.

We performed 35 living donor transplants in 2021 including 5 living donations to paediatric recipients. While overall survival outcomes for first living donor allografts are comparable to deceased donor allografts at one year post transplant at 95% and 94% respectively, they are noticeably better for patient survival at 99.7% versus 97.6%. The real benefits of living donor transplantation become apparent when we observe longer term outcomes. At 10 years post

transplant, adult living donor recipients have an 80% allograft and 91% patient survival compared to 68% deceased donor allograft and 79% patient survival. In addition, patients who received a living donor kidney 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. It is for these reasons that our motto is 'Living Donor First'.

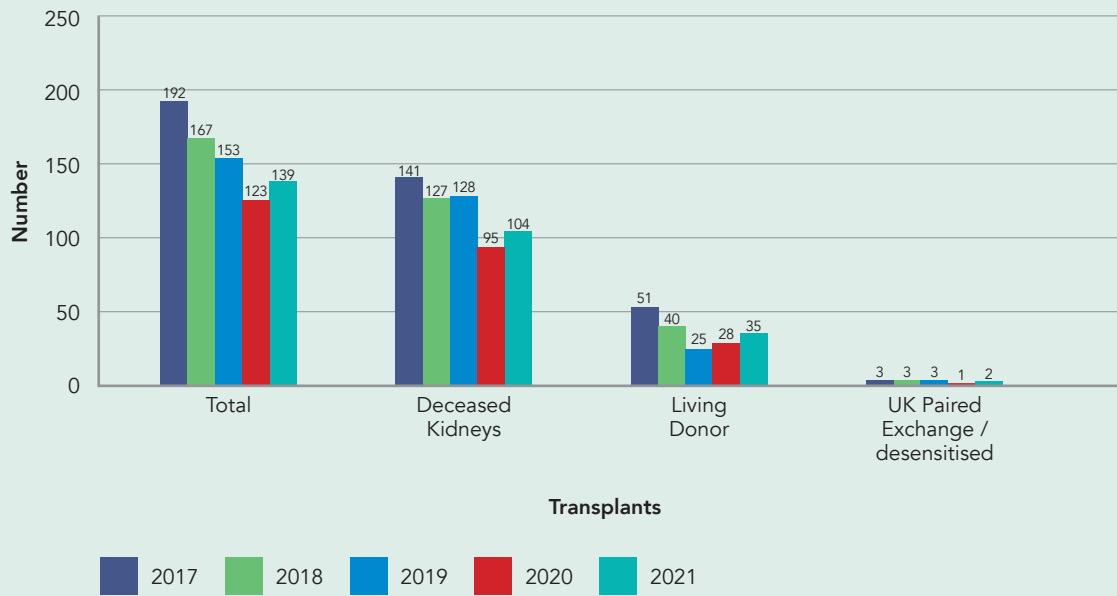
In summary, 2021 has again proven to be one of the more challenging years for everyone involved in healthcare provision but especially for patients awaiting a life-changing kidney transplant. We would like to acknowledge the ongoing work and efforts of all the members of the transplant team, the staff of the intensive care units throughout the country and all the staff in Beaumont Hospital who have supported us, since the start of this pandemic. 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 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. 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 2017 – 2021

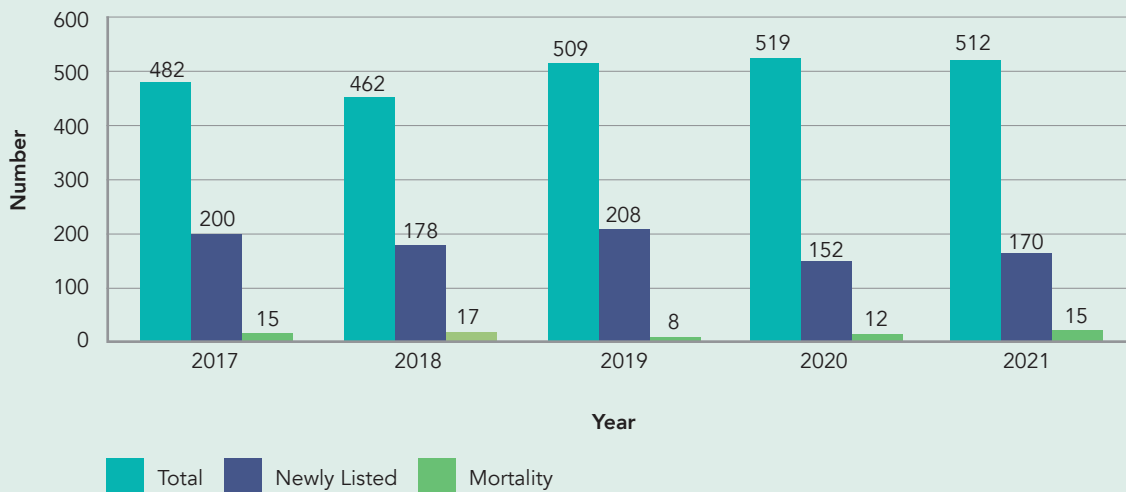
Figure 8: Kidney Transplants 2017 – 2021



Source: National Renal Transplant Centre Beaumont Hospital

Kidney Transplant Waiting List 2017 – 2021

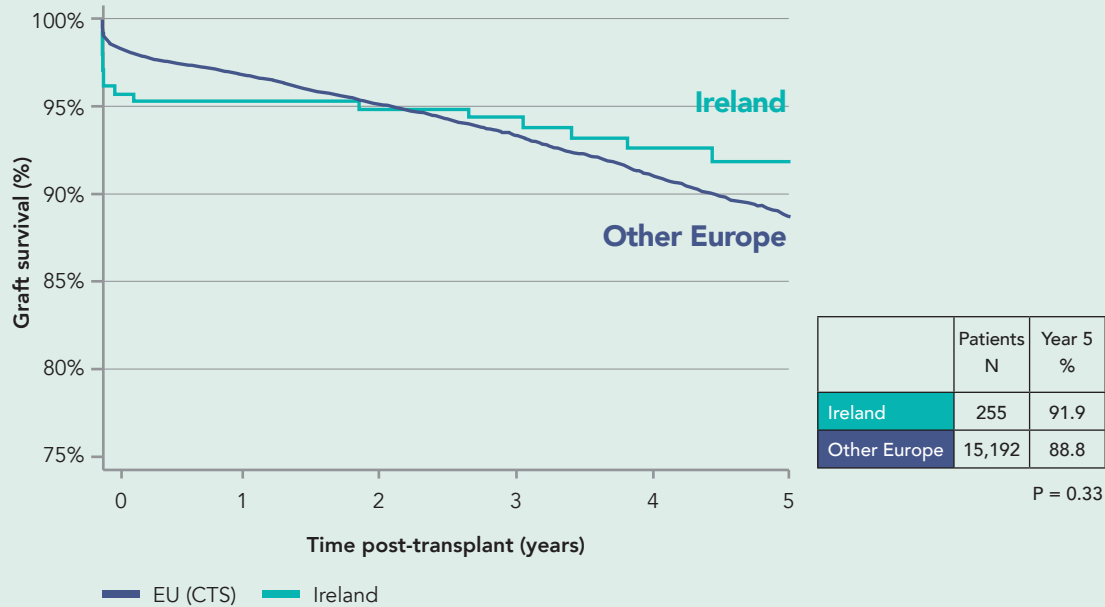
Figure 9: Kidney Transplant Waiting List 2017 – 2021



Source: National Renal Transplant Centre Beaumont Hospital

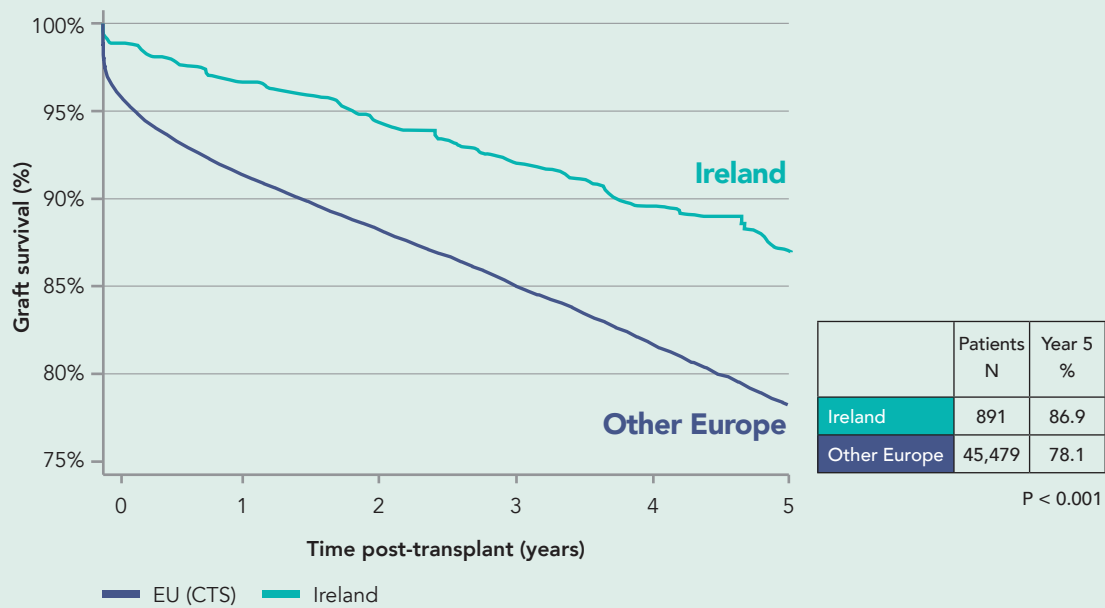
First Adult Kidney Only Transplants 2012 – 2020

Figure 10: First Adult Only Kidney Transplants 2012 - 2020 Living Donor



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

Figure 11: First Adult Kidney Only Transplants 2012 - 2020 Deceased Donor



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

Survival Post Kidney Allograft Transplant

Figure 12: Adult First Deceased Donor Allograft 2012 – 2020

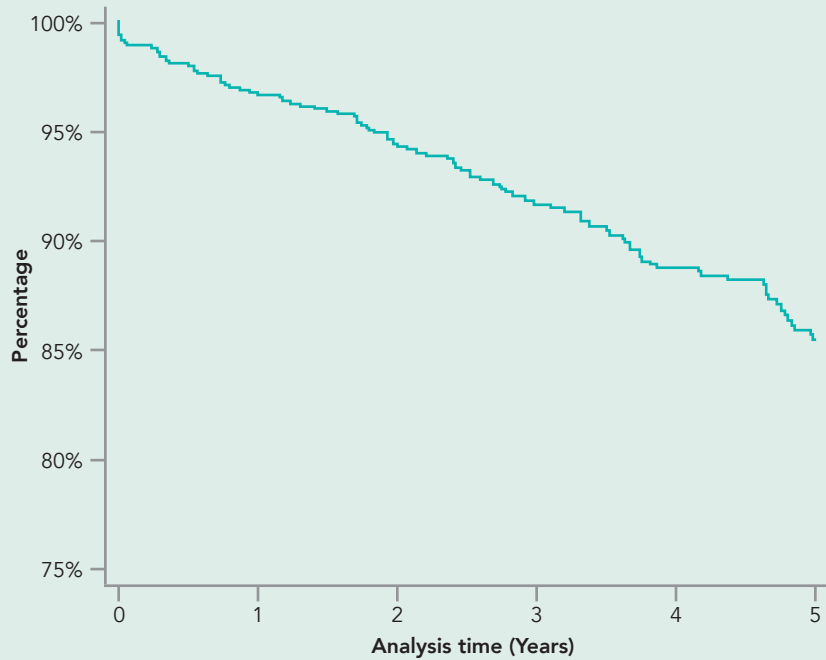
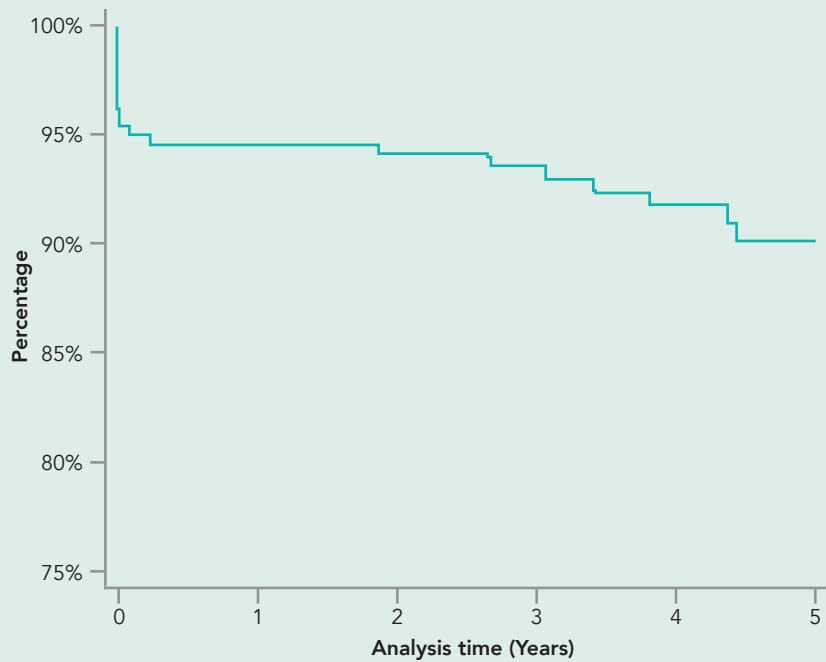


Figure 13: Adult First Living Donor Kidney Allograft Survival 2012–2020



<http://www.beaumont.ie/Kidneycentre-annualreport2021>

National Liver Transplant Service, St Vincent's University Hospital

St Vincent's University Hospital was designated as the National Liver Transplant Centre in 1992 and completed its first liver transplant in January 1993. From humble beginnings, where 12 – 18 transplants a year were carried out, the programme has continued to develop and expand and has now completed its 29th year of operation. 2021 continued to be a year that provided many challenges for the world at large and the Irish Liver Transplant programme was no different. Due to the challenges of COVID 19 donor numbers were again down on previous years but the liver transplant programme continued due to the tremendous support of all involved in St. Vincent's University Hospital, Organ Donation and Transplant Ireland, Intensive Care Staff Nationally and the overwhelming generosity of our donor's families. 35 liver transplants were completed in 2021.

Due to its continued success, there have been an ever increasing number of patients referred for consideration and assessment for liver transplantation. 80 patients were referred for transplant assessment to the Liver Transplant Service in 2021. This increasing workload resulted

in transplant numbers of over 1,260 liver transplants by the end of 2021 and 53 new patients being added to the waiting list during the year.

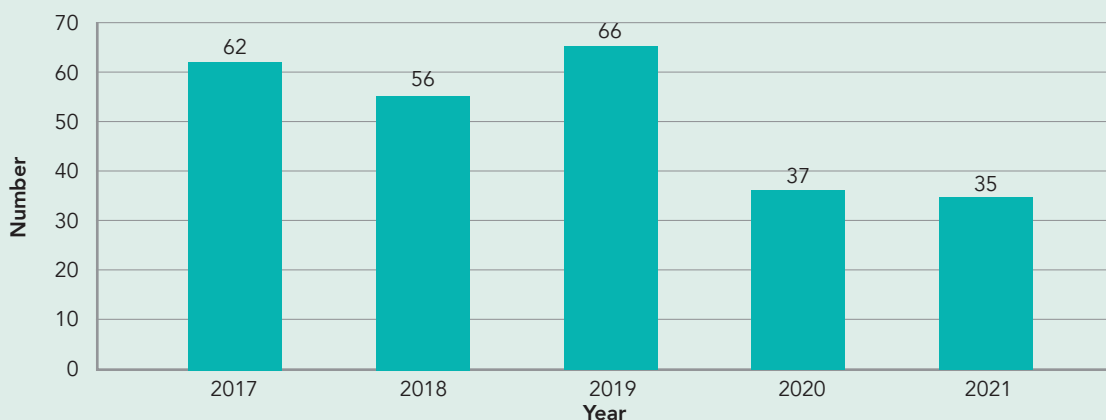
St Vincent's University Hospital (SVUH) provides a Consultant led Liver Transplant Service with a large proportion of the assessments being carried out in the out-patient setting. Patients are cared for in SVUH by a multi-disciplinary team which combines the expertise of the Surgical and Hepatology teams, Anaesthesia, Dietetics, Physiotherapy, Intensivists, Specialist nursing staff and Transplant Co-ordinators with other allied health professionals. Following transplant life-long care is provided to all liver transplant patients in SVUH.

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

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

Liver Transplants 2017 – 2021

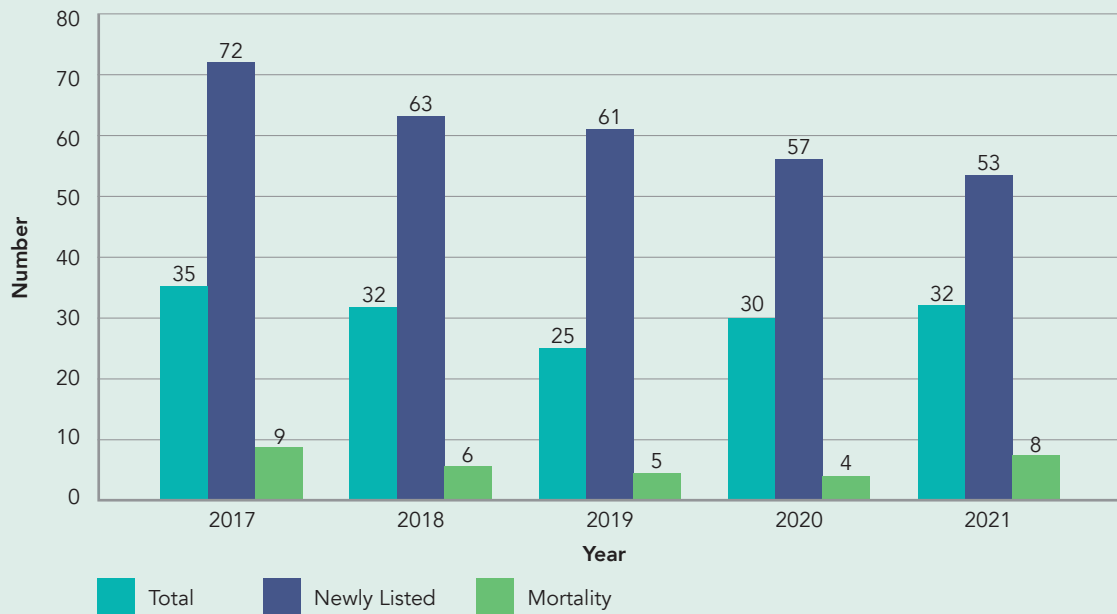
Figure 14: Liver Transplant 2017 – 2021



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

Liver Transplant Waiting List 2017 – 2021

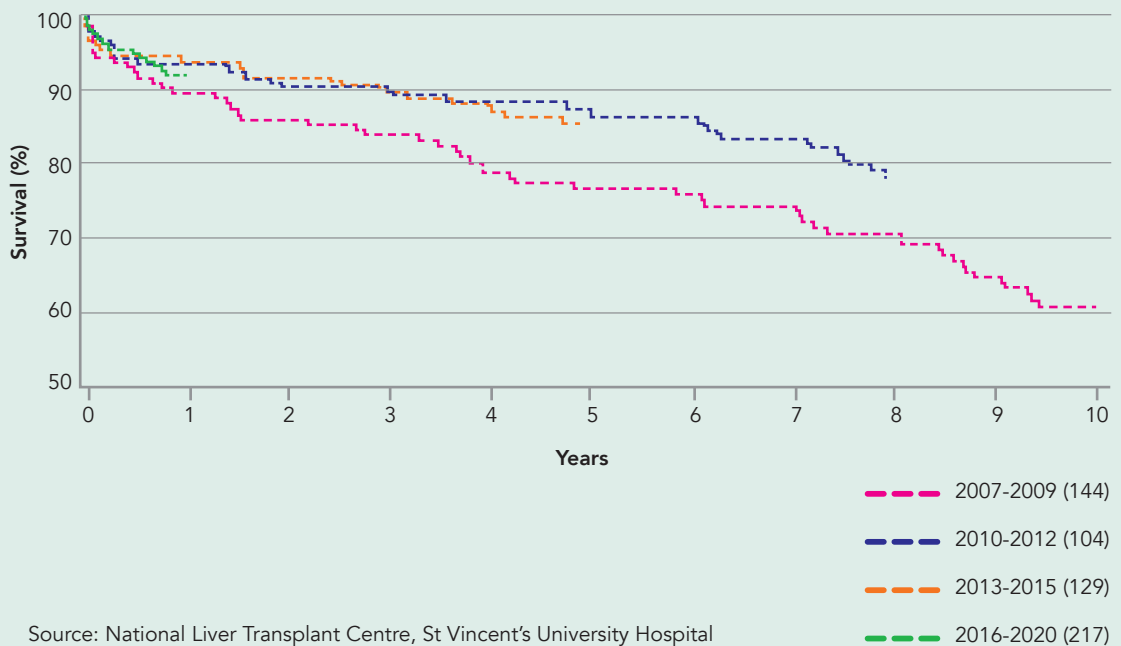
Figure 15: Liver Transplant Waiting List 2017 – 2021



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 2007 – 31 December 2020



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 2007 – 31 December 2020

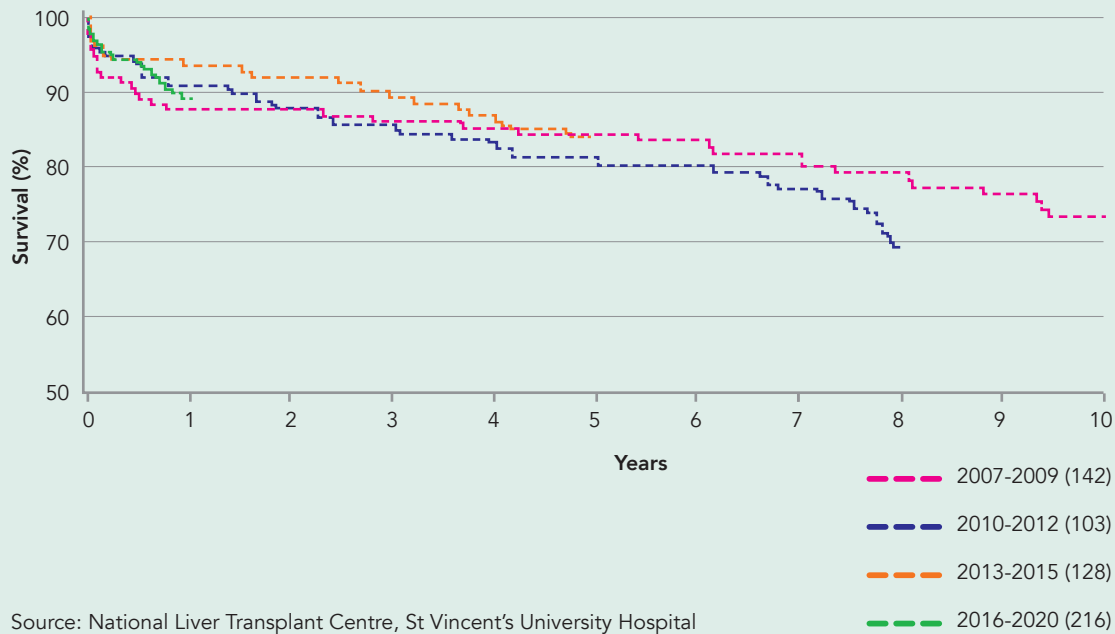


Table 3: Patient survival after first elective adult liver only transplant from a DBD 1 January 2007 - 31 December 2020

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval)			
		One year 0.5913	Two year 0.3274	Five year 0.0613	Ten year
2007-2009	144	90 (83-94)	86 (79-91)	77 (69-83)	61 (52-69)
2010-2012	104	93 (86-97)	90 (83-95)	87 (79-92)	
2013-2015	129	94 (88-97)	91 (85-95)	85 (78-91)	
2016-2020	217	92 (87-95)			

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 this matter. 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.

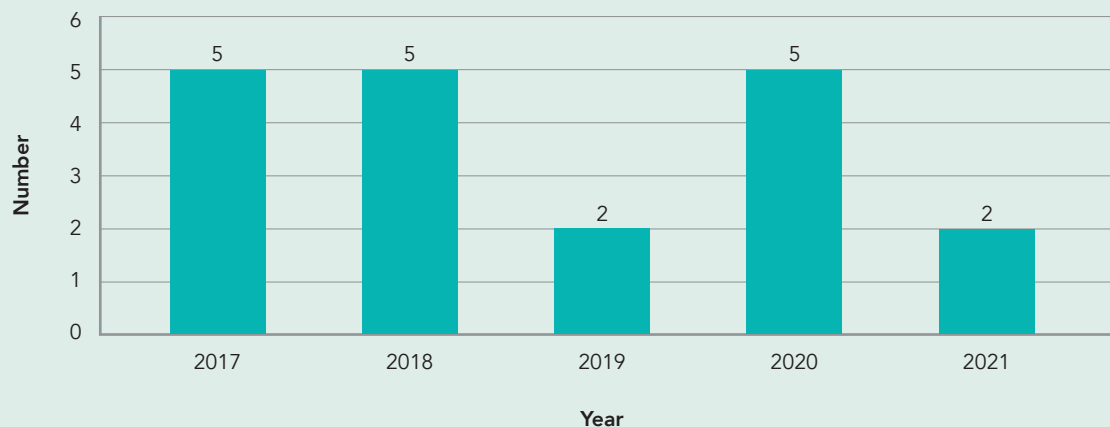
Up to the present time 17 simultaneous pancreas and kidney transplants have been carried out at SVUH, 5 in 2017, 5 in 2018, 2 in 2019, 3 in 2020 and a further 2 in 2021. 2 Pancreas after kidney transplants were also carried out in 2020. It is hoped that the numbers will increase this year, but this is limited by the number of suitable pancreas and kidney donors available

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 2017 – 2021

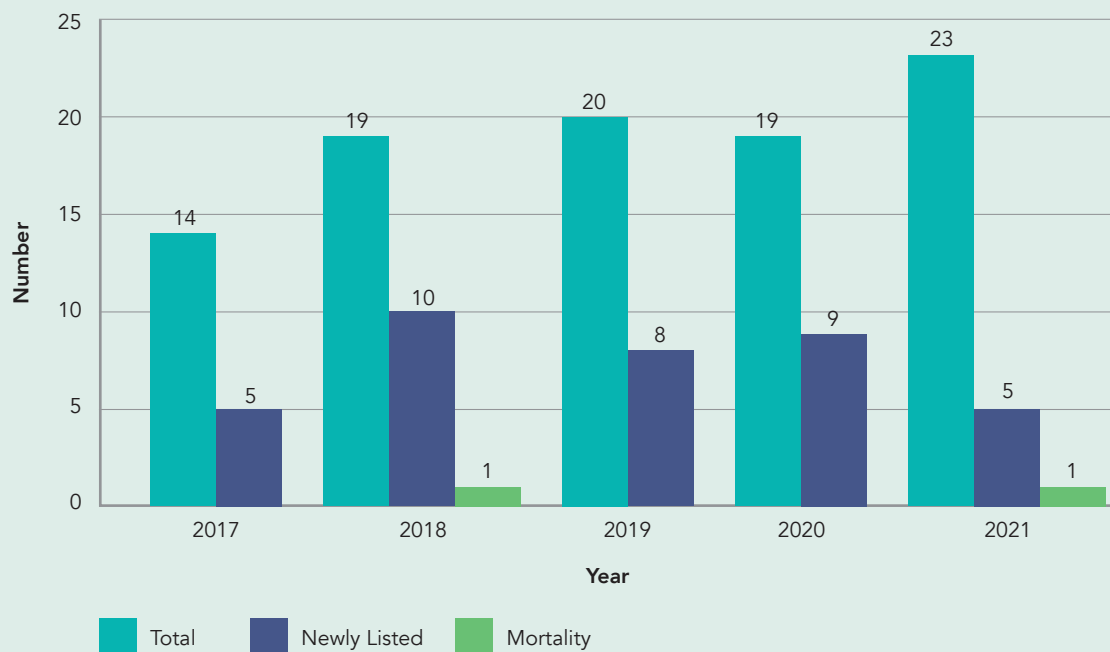
Figure 18: Pancreas Transplants 2017 – 2021



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

Pancreas Transplant Waiting List 2017 – 2021

Figure 19: Pancreas Transplant Waiting List 2017 – 2021



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

National Heart and Lung Transplant Service: Mater Misericordiae University Hospital

The Thoracic Organ Transplantations at Mater Misericordiae University Hospital showed increased activity in 2021 compared to the previous year despite the continued COVID 19 Pandemic. The number of heart transplants remained the same while twenty lung transplants were performed which showed a 25% increase compared to 2020, this was achieved although our program was under tremendous pressures in terms of Intensive Care and Ward beds.

The first combined Heart-Liver Transplant in Ireland was also performed in 2021. The close collaboration of the two transplant units and the overall level of expertise made the transplant and the aftercare progress as smoothly as could be expected in a very complex case.

This year we actively participated in the setting up of the DCD program through several meetings with the stakeholders and setting up protocols. We are grateful to ODTI for funding the new EVLP machine which is instrumental for our DCD program (our old machine being outdated and needed replacement). The new Machine is now purchased and training of staff is in progress.

More work needs to be done in order to get to the levels of activity we had prior to the pandemic and our aim is even to exceed those through more use of organs from donors with extended criteria, DCD program and cross border collaboration with Northern Ireland. The appointment of two more cardiologists with interest in heart transplantation is also a welcoming event that will boost the cardiac & VAD program.

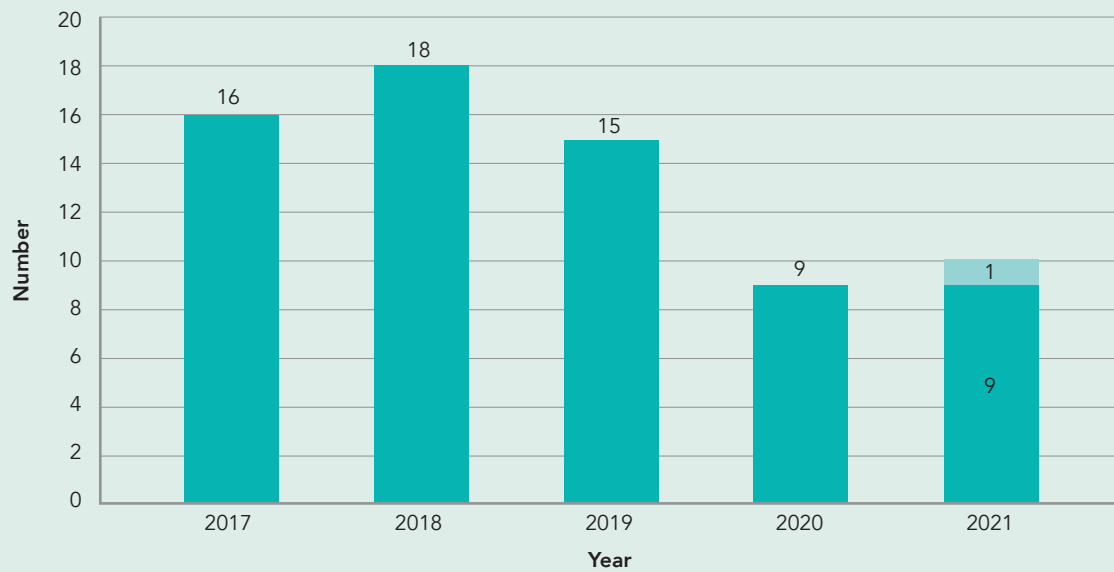
This year also saw the successful covid vaccination of patients on the transplant list and those already transplanted. Unfortunately, a few of our transplanted patients became very sick with COVID 19 needing prolonged ICU admissions, and a few succumbed to this disease. Our hearts & minds goes to the families of these patients who fought initially with their original illness, and after going through a successful transplantation had to confront this new virus and fight for their lives again.

On behalf of our team, I would like to thank all those who have been involved in the process of organ donation & transplantation; especially those individuals who chose to donate their organs, and their families; who had to go through the donation process at a time of great loss and anguish, none of this could be achieved without them. Thank you.

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

Heart Transplants 2017 – 2021

Figure 20: Heart Transplants 2017 – 2021



*CHI Crumlin
Source: National Heart and Lung Centre, Mater Misericordiae University Hospital

Heart Transplant Waiting List 2017 – 2021

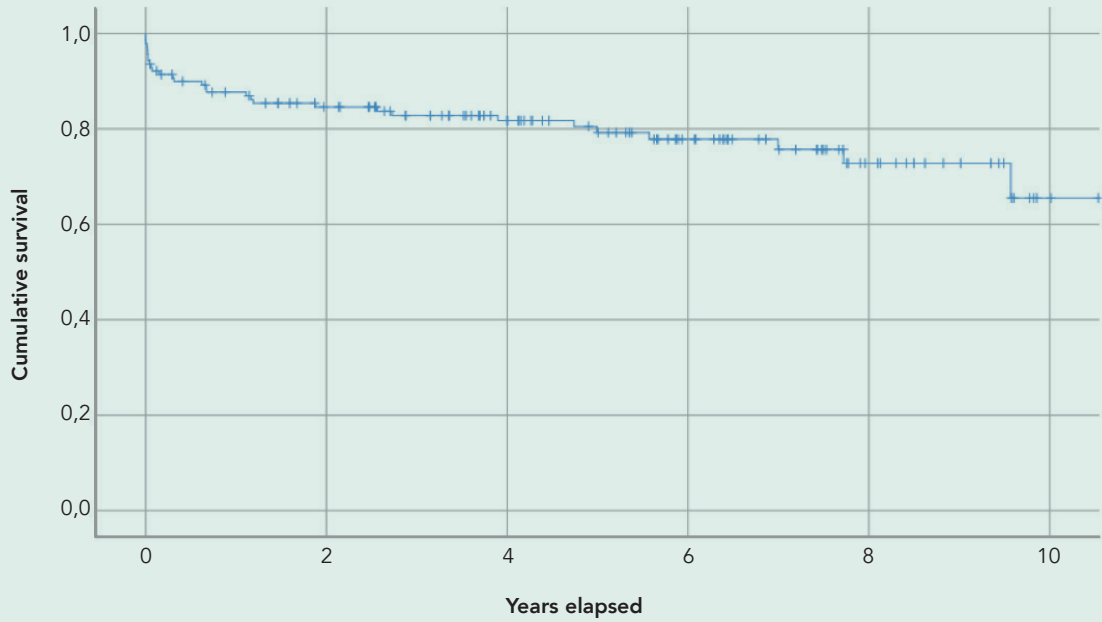
Figure 21: Heart Transplant Waiting List 2017 – 2021



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

Survival Post Heart Transplantation

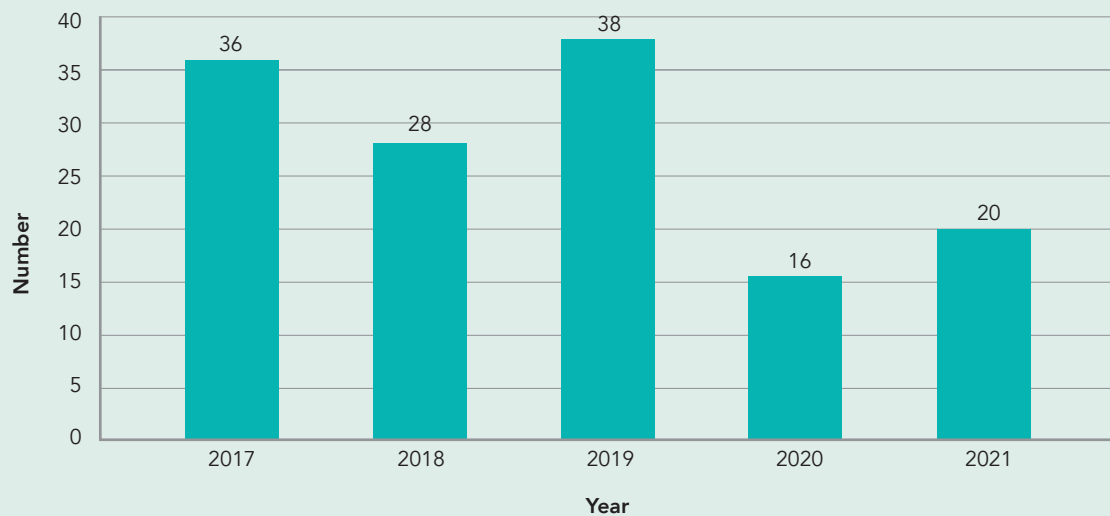
Figure 22: Survival Post Cardiac Transplant



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

Lung Transplants 2017 – 2020

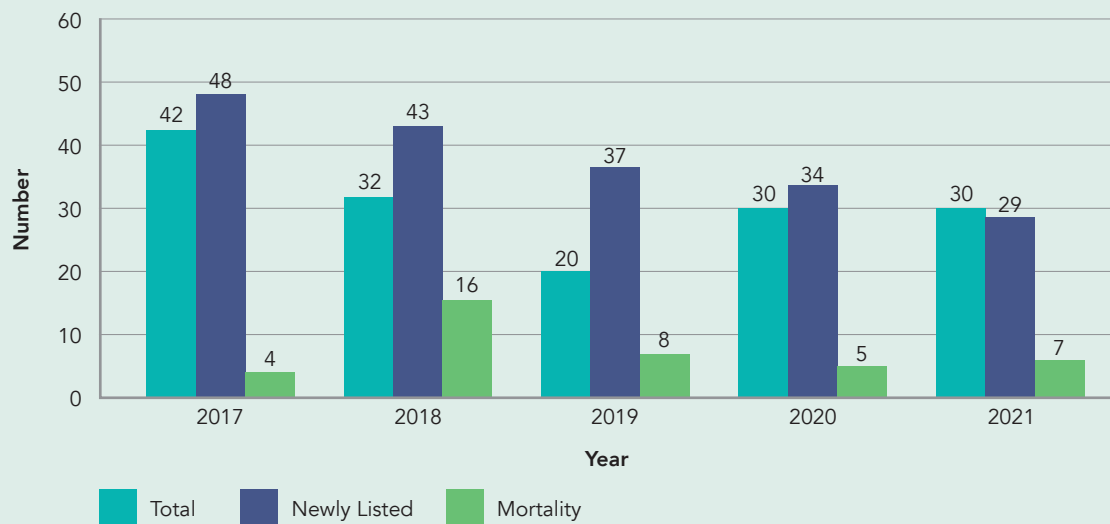
Figure 23: Lung Transplants 2017 – 2021



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

Lung Transplant Waiting List 2017 – 2021

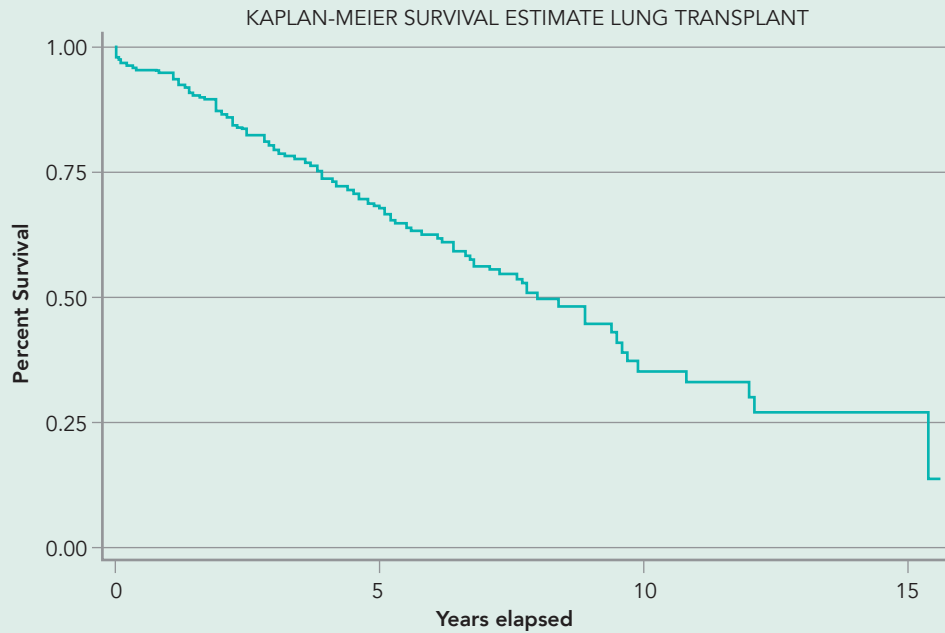
Figure 24: Lung Transplant Waiting List 2017 – 2021



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

Survival Post Lung Transplantation

Figure 25: Survival Post Lung Transplant

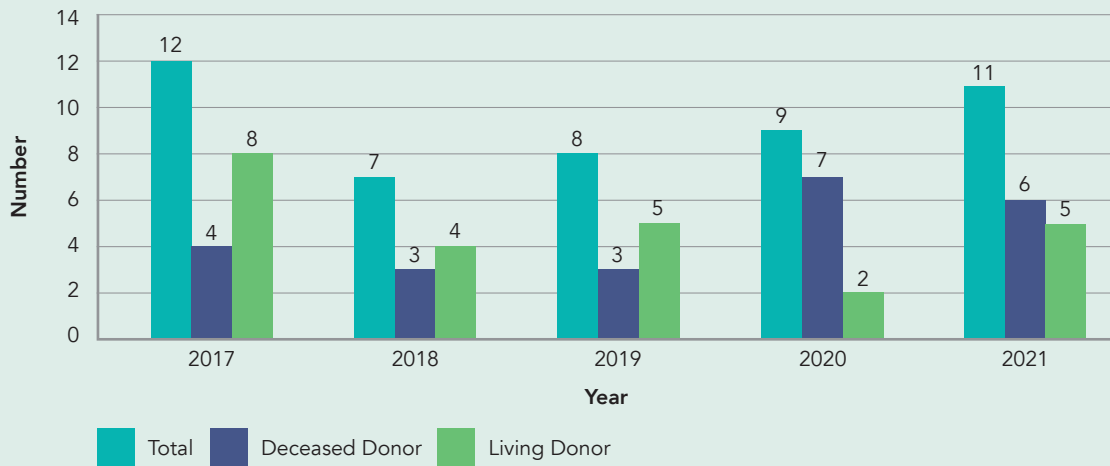


Source: The National Heart and Lung Transplant Centre, Mater Misericordiae University Hospital

Paediatric Transplant Activity

Paediatric Kidney Transplant 2017 – 2021

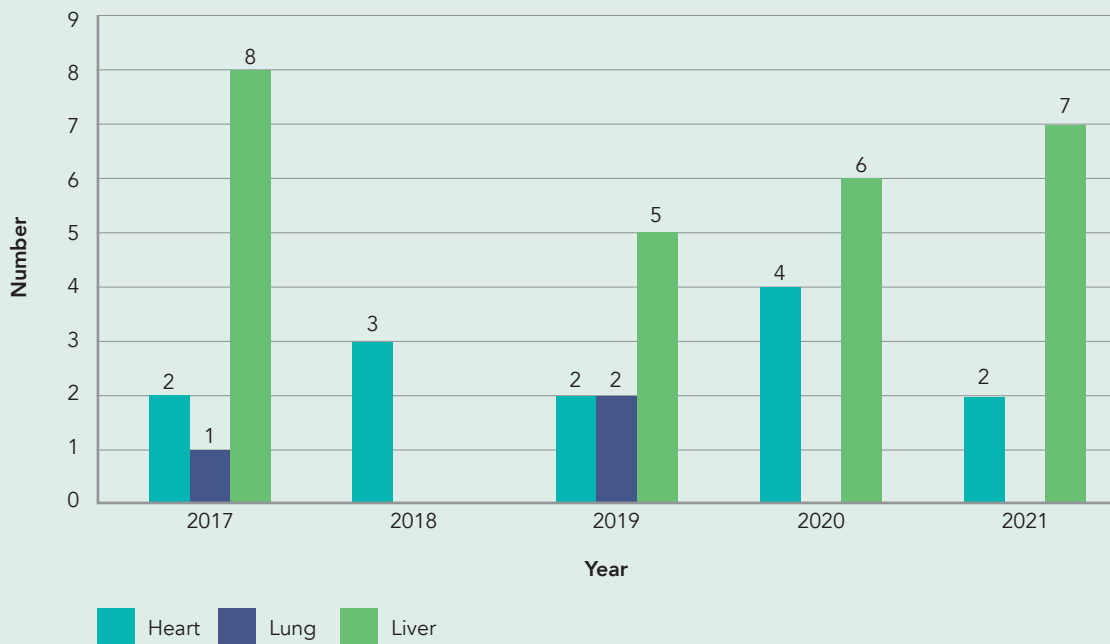
Figure 26: Paediatric Kidney Transplants 2017 – 2021



Source: National Renal Transplant Centre, Beaumont Hospital

Irish Paediatric Transplants performed in the UK

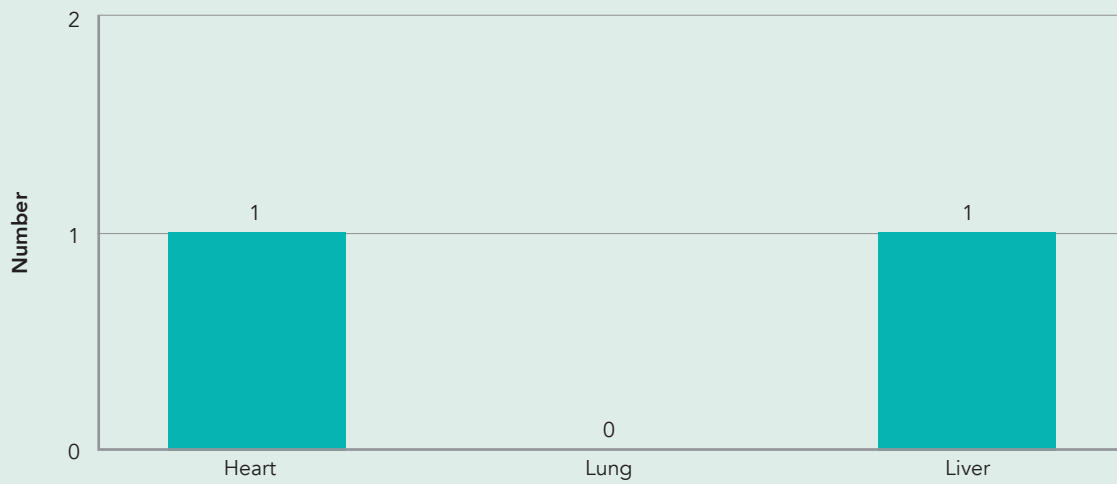
Figure 27: Irish Paediatric Transplants performed in the UK 2017 – 2021



Source: Our Lady's Children's Hospital, Crumlin, HSE Cystic Fibrosis Centres

Irish Paediatric Waiting List UK End of December 2021

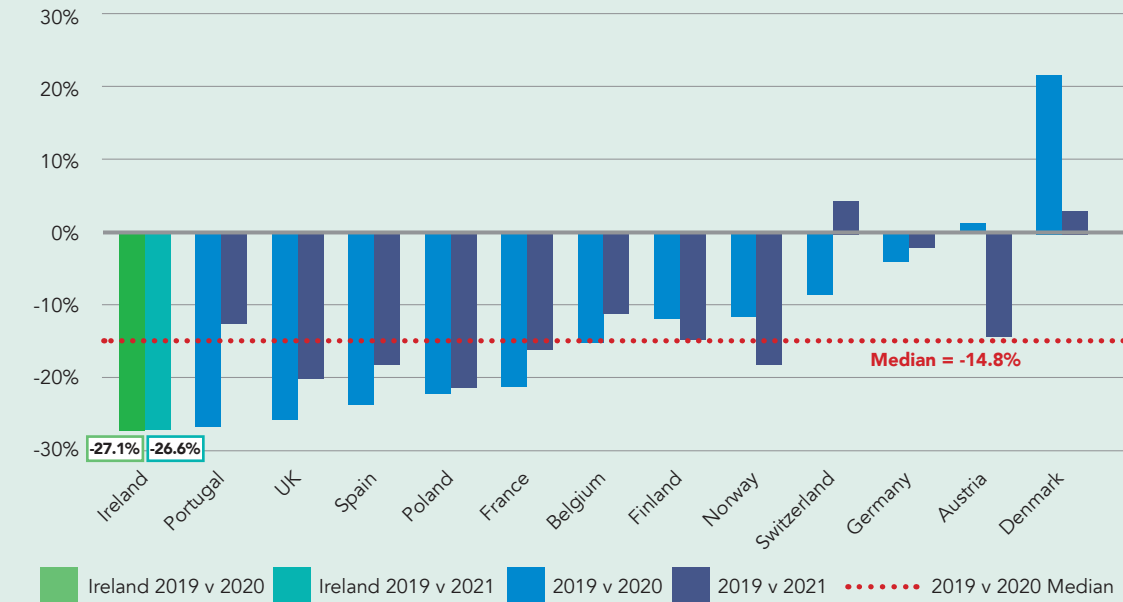
Figure 28: Irish paediatric waiting list in the UK End Of December



Source: Our Lady's Children's Hospital, Crumlin, HSE Cystic Fibrosis Centres

International Comparison Figures

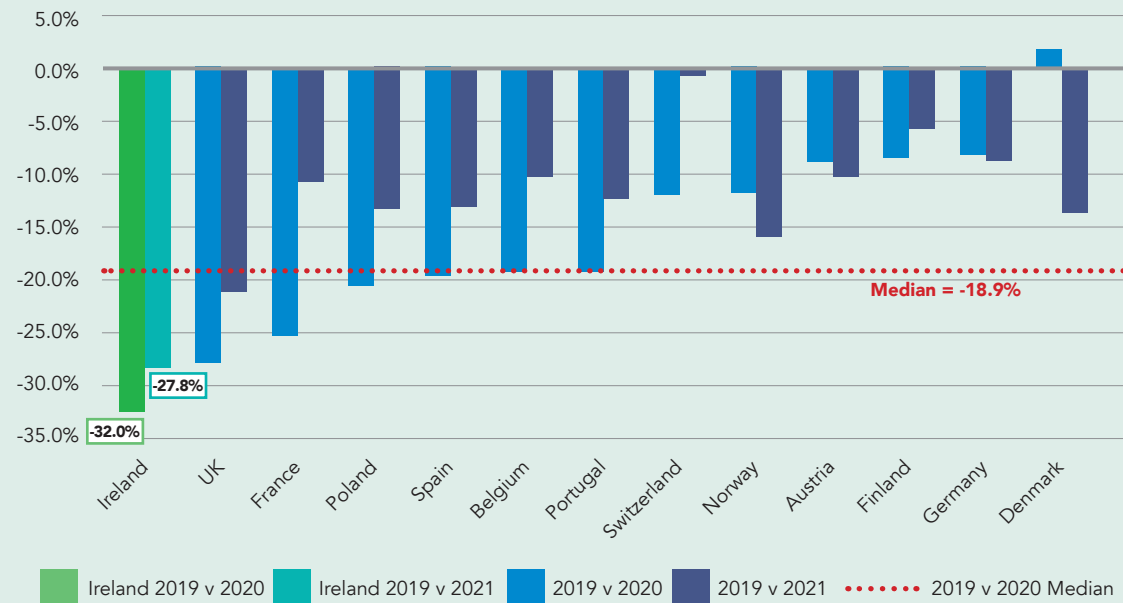
Figure 29: International Percentage Change in Deceased Donors Following COVID 19



Source*

2019 = baseline pre-COVID activity

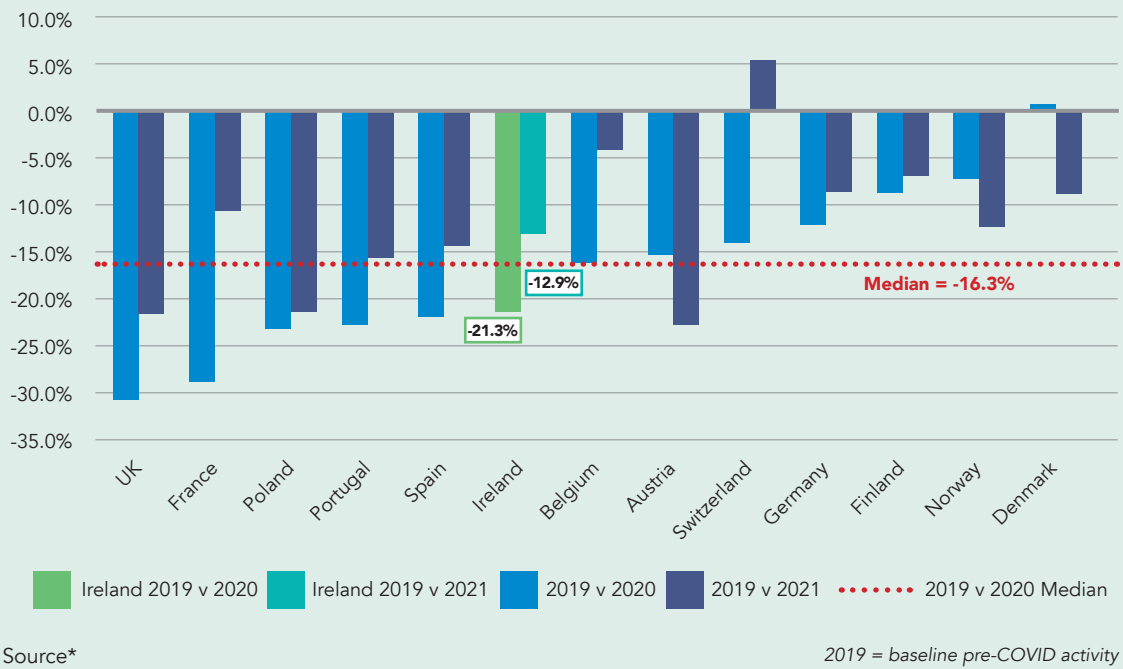
Figure 30: International Percentage Change in Total Transplants Following COVID 19



Source*

2019 = baseline pre-COVID activity

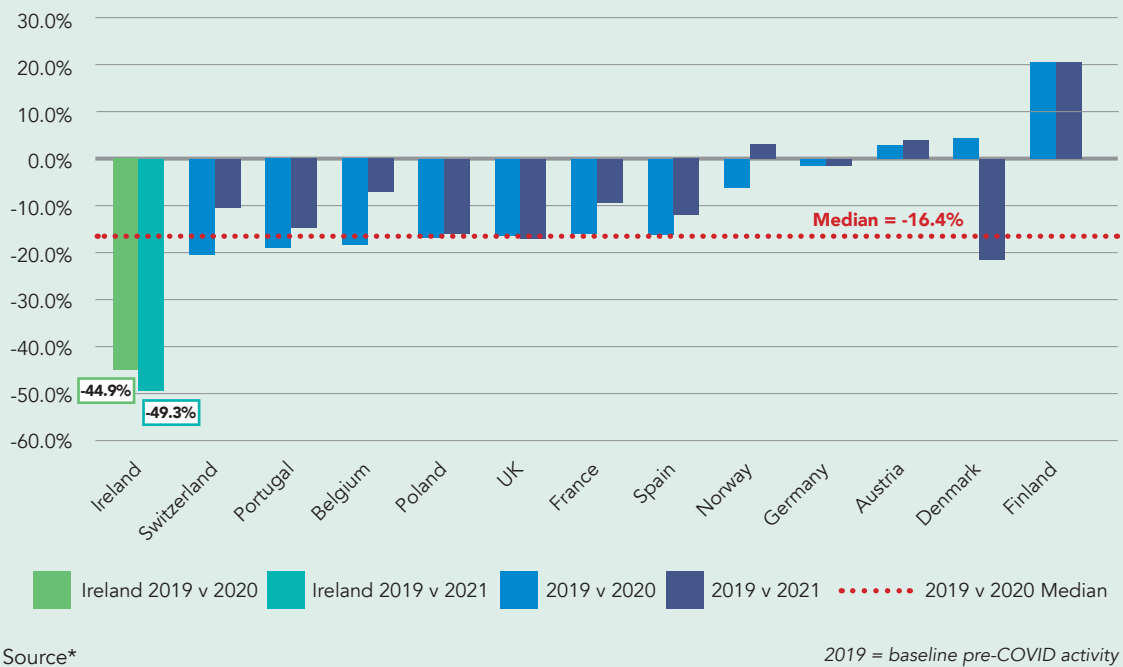
Figure 31: International Percentage Change in Kidney Transplant Following COVID 19



Source*

2019 = baseline pre-COVID activity

Figure 32: International Percentage Change in Liver Transplant Following COVID 19



Source*

2019 = baseline pre-COVID activity

Figure 33: International Percentage Change in Heart Transplant Following COVID 19

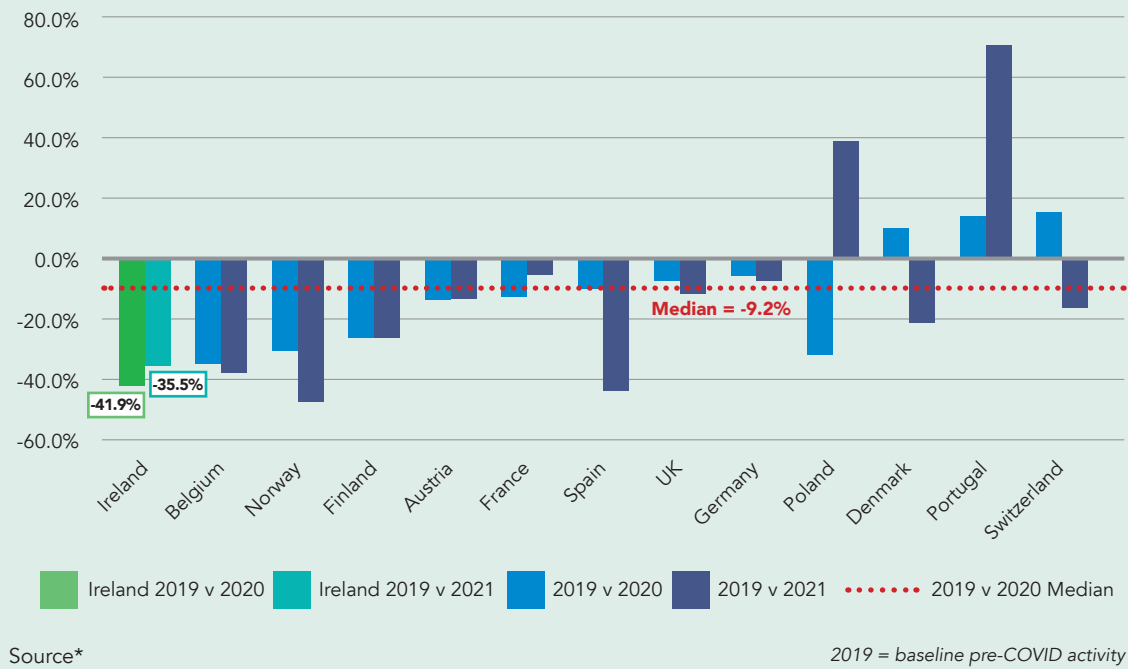
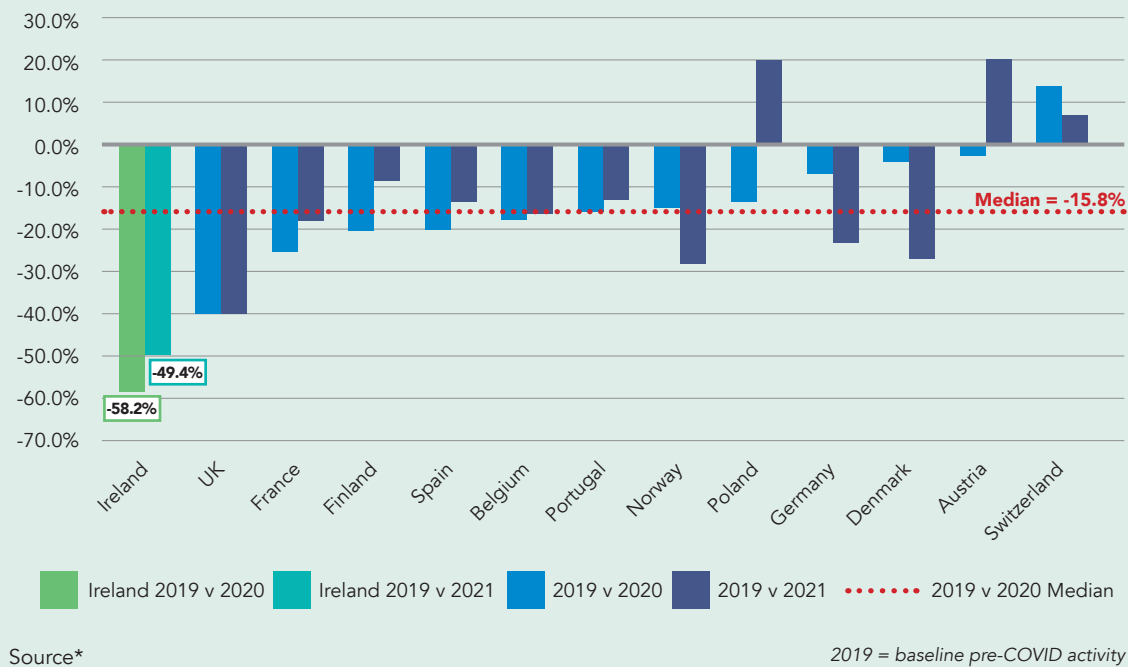


Figure 34: International Percentage Change in Lung Transplant Following COVID 19



* - EDQM, Council of Europe & ONT, International figures on donation and transplantation 2020, EDQM Vol 26, 2021
 - EDQM, Council of Europe & ONT, Preliminary Report: Newsletter Transplant. International figures on donation and transplantation 2021

Quality Framework

In February 2021, the National Organ Procurement Service (NOPS) saw the appointment of a full time dedicated Quality Manager.

Continuous Improvement

The Quality team began a strategic implementation of a Quality Management System (QMS) aligned with a recognised quality improvement methodology. Use of this method helps in formulating and evaluating policies and procedures by providing a simple and effective approach for solving problems and managing change. Further development will be required in 2022.

A full process review, was conducted in Q3 2020 which informed the development of the continuous improvement plan. As a result, the quality department redesigned documents and procedures to facilitate the process improvement, thus ensuring that the process of organ procurement and quality management is aligned with national and international standards (HSE and EDQM).

Quality Review

The ODTI COVID 19 Response Plan remained active for the duration of 2021. The NOPS team continue to risk assess potential organ donors. They follow guidance from NODTAG which is in line with European Centre for Disease Prevention

and Control (ECDC). The formation of a real time multidisciplinary team to manage changes within transplantation was fundamental to the provision of the service throughout the pandemic.

In May 2021, the HSE was a victim of a malware attack which resulted in the curtailment of Information Communication Technology (ICT) which directly impacted the service. In conjunction with our external stakeholders, we developed the Donor Coordination Business Continuity Plan, which allowed us to continue safe coordination of organ procurement in the absence of ICT.

In September 2021, Health Products Regulatory Authority (HPRA) inspection of NOPS was undertaken with no major deficiencies identified. We continue to work with HPRA on developing continuous improvement for the procurement process.

Quality Activity

In partnership with all services involved in donation and transplantation services ODTI/NOPS encourages a culture of incident reporting. This is key to identifying possible risks in the process and highlights opportunities for improvement. All incidents reported are logged in the QMS. A root cause analysis is carried out using a quality improvement methodology and where necessary, corrective and preventative measures were put in place. Figure 35 demonstrates the quality activities over the previous 5 years.

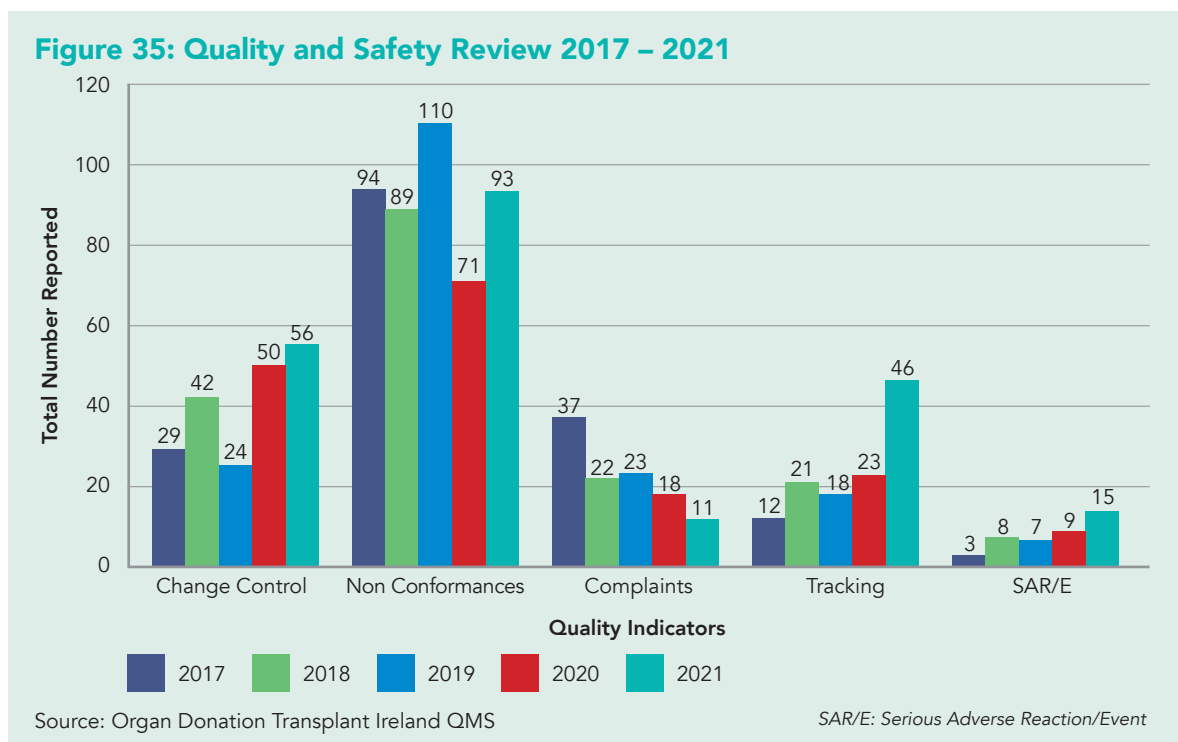
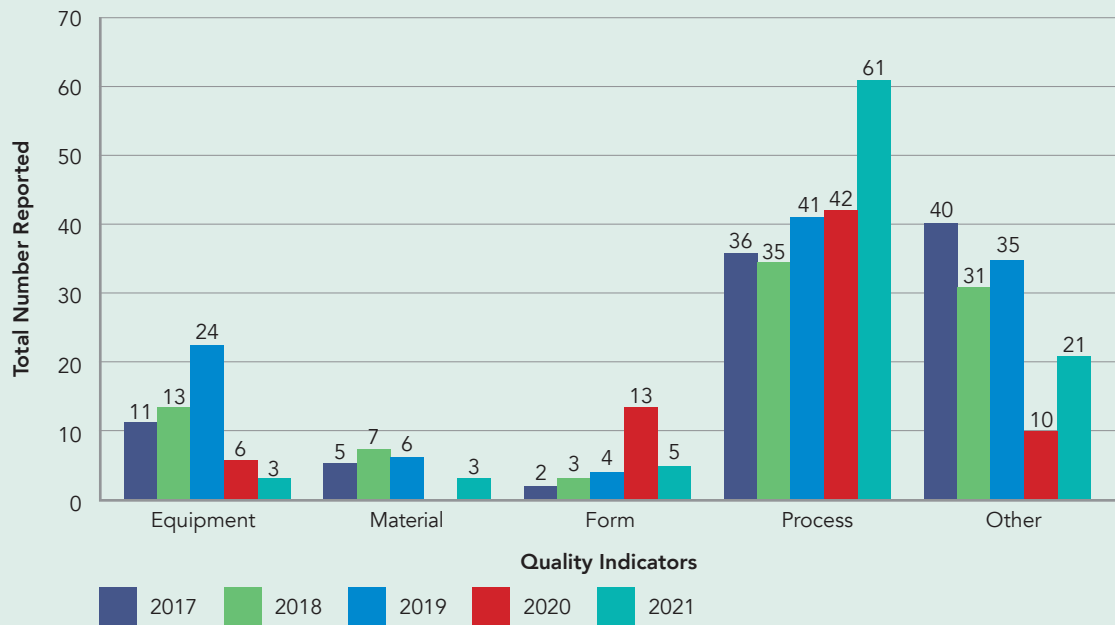


Figure 36: Non-conformance by cause



Change Controls i.e., any change to the process, material, equipment and facilities that may impact the quality and safety of organs should be reflected in documentation. In 2021 there were 56 change controls raised. Figure 35 demonstrates the trend between 2017 to 2021, a significant increase in 2020 was due to an internal review of the NOPS process. Non-conformances identified include deviations, incidents, accidents, and Serious Adverse Reactions and Events (SAR/Es). The total number of non conformances raised during 2021 was 93. This can be attributed to the encouragement that is being given to reporting of incidents to the QMS. Figure 36 demonstrates reported non-conformances by category.

The Complaint System processed 11 complaints in 2021 from external and internal sources covering issues within the process. All complaints were investigated with follow up and associated corrective and preventative actions were

taken. Figure 35 demonstrates total number of complaints reported to the NOPS QMS.

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 15 SAEs reported by NOPS to the HPRA and ODTI during 2021.

In 2021, internal and external audits took place in accordance to the annual audit plan, which has been approved by the responsible person. All findings were reported and registered for follow-up actions.

Risk analysis is set as a mandatory aspect of every change request. In 2021, the development of a log of risk, facilitated rating of risks in line with the HSE National Risk Management Policy was undertaken.

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

Professor Jim Egan

Director Organ Donation Transplant Ireland
Chair NODTAG

Ms. Angela Fitzgerald

Assistant National Director,
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 McGee

Consultant Nephrologist
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, Director ODTI
Dr Brian O'Brien, Deputy Clinical Director
Caroline Lynch, Assistant Director of Nursing, ODTI
Emma Corrigan, Donor Coordinator
Lynn Martin, Donor Coordinator
Jean O'Reilly, Donor Coordinator
Brenda Poole, Donor Coordinator
Elaine Pierce-Kelly, Donor Coordinator
Breda Conlon, Donor Coordinator
Eimear Shields, Donor Coordinator
Claire Dalton, Donor Coordinator

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
Professor 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

Siobhan Brosnan, University of Limerick Hospital Group* (RIP)
Breda Doyle, South/South West Hospital Group
Karen Healy, RCSI Hospital Group
Pauline May, Saolta University Hospital Group
Nikki Phillips, Dublin/Midlands Hospital Group
Bernie Nohilly, Ireland East Hospital Group

Quality Team

Paul Hendrick, Quality and Compliance Consultant
Hilary Barry, NOPS Quality Manager
Máire Ní Chinnéide, Transplant Centre Quality Manager
Sinead Cronnolly, Transplant Centre Quality Manager
Edel Ward, Transplant Centre Quality Manager

ODTI / NOPS Operations and Administration Support

John Walsh, Chief Operations Officer
Kathleen Tyrrell, Senior Administrator
Tara Maguire, Administration Business Lead
Dara Kelly, Data and Quality Management Administrator
Steven Kawala, Data and Quality Management Administrator

In Memoriam

In April 2021 our wonderful, esteemed, elegant colleague and beloved friend Siobhan Brosnan (Shanahan), tragically lost her life following a road traffic collision.

Siobhan worked for over 20 years in intensive care units all over the world. Her experience and dedication was evident in her role as Organ Donation Nurse Manager in University Hospital Limerick.

She showed empathy, understanding and above all compassion when dealing with patients and their families.

The tragic accident cast a mournful shadow over her home towns of Ballybunion and Adare. It is an immense loss to her family and all that knew her, especially those in the Organ Donation Community and wider health service.

Her death followed a week long campaign for Organ Donor Awareness Week, organised by the IKA to raise awareness about the importance of organ donation. During the 2020 campaign Siobhan completed a video promoting organ donation advising everyone to 'have that conversation'. Her husband Patrick and family clearly knew her wishes and in a fitting tribute to her memory they consented to organ donation.



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- 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).

ODTI Organ Donation Transplant Ireland

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

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

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