



Health
NSW Organ & Tissue
Donation Service

Incorporating:
NSW Bone Bank
Lions NSW Eye Bank
Australian Ocular Biobank

Part of the
DonateLife
network



NSW Tissue Bank Newsletter

March 2022



Welcome to the March 2022 edition of the NSW Tissue Bank Newsletter

2021 ORGAN AND TISSUE DONATION OUTCOMES RELEASED

In February, the 2021 national figures for organ and tissue donation were announced by the Organ and Tissue Authority.

Despite the pressure that COVID-19 continued to put on the Australian health care system, the lives of 1,174 Australians were changed due to the generosity of 421 deceased organ donors and their families. There were also 1,472 deceased eye donors, 313 deceased tissue donors, as well as 203 living organ donors and 2,994 living tissue donors who saved or transformed the lives of thousands of Australians this past year.

The 2021 Activity Report summarises the donation outcomes across the country, each state and territory influenced by varying levels of COVID infection and restrictions. When compared with 2020, nationally there has been a 9% decrease in the number of deceased donors and 7% decrease in the number of people receiving an organ transplant. However, this reduced donation and transplantation activity is consistent with the experience of other countries such as the UK and Canada.

	Deceased organ donors	Organ transplants ¹	Consent rate	New registrations ²
New South Wales	109	320	51%	110,331

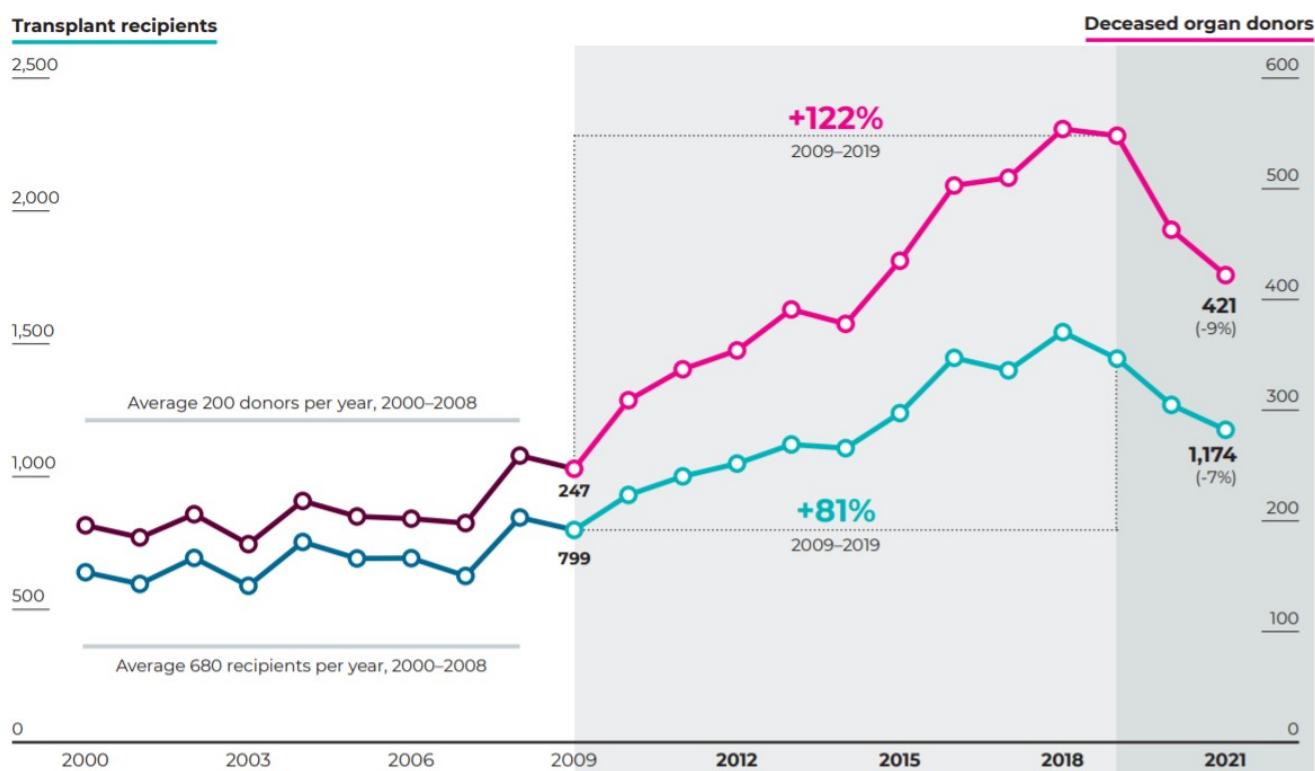


The NSW Tissue Bank incorporating the Lions NSW Eye Bank, NSW Bone Bank and Australian Ocular Biobank, acknowledges the outstanding generosity and long term support of the Lions NSW-ACT Save Sight Foundation.

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Deceased organ donation and transplant recipients in Australia 2000–2021



Note: The Australian Government's national program to improve opportunities for transplantation through increased organ and tissue donation began in 2009.

Deceased eye donation and corneal transplants recipients in Australia

Figure 21 / Deceased eye donors

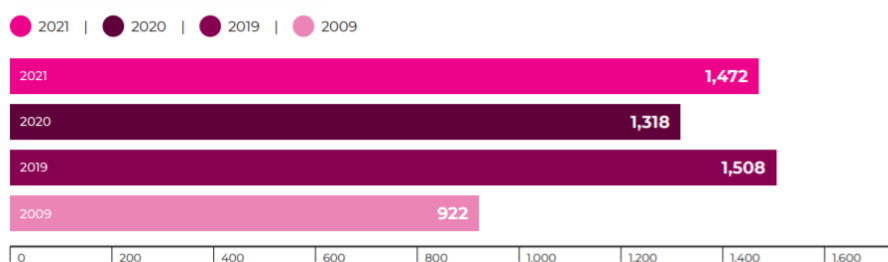
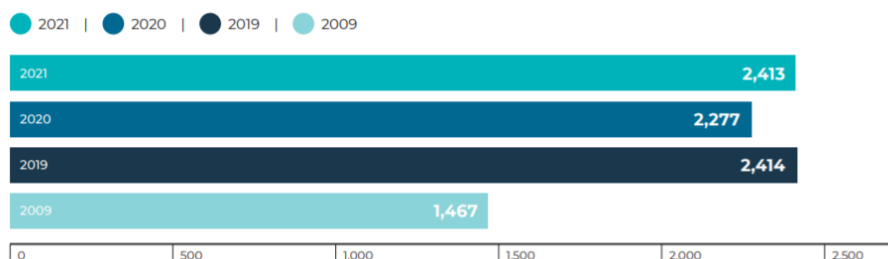


Figure 22 / Corneal transplants



Donation Rates

The national donation target for deceased donation is 25.0 donors per million population (dpmp).

	National	NSW
Donors	421	109
dpmp	16.4	13.7

State and territory outcomes in 2021 continued to demonstrate variation, with donation rates ranging from 8.1 dpmp to 28.2 dpmp.

Head to the DonatLife website to [read the full report](#).

NEW REGISTRATION RECORD

Australia has set a new record in registered organ donors with 2021 seeing an enormous 87% increase in registrations when compared to 2020. Close to 350,000 people joined the 7 million other Australians that have already registered their support for donation on the Australian Organ Donor Register (AODR). Organ and Tissue Authority CEO Lucinda Barry credits this incredible increase to an unexpected side-effect of the pandemic, with many Australians registering while accessing their vaccination certificate. New South Wales saw the largest increase in registrations nationally with 110,331 people signing up to be donors.

"In such a challenging year for all Australians, it was great to see a record number of people registering and showing their support," Ms Barry said. As the pandemic continued into its second year, travel restrictions and surgery halts caused a fall in donor and transplant numbers but "going forward our national focus is to do all that we can to see donation and transplantation rates returning to pre-pandemic levels", details Ms Barry. Despite all the interruptions, 2021 saw 1174 people receive donations nationally from 421 deceased donors.

One of those recipients was two year old Riley Swander. At 32 days old, Riley was diagnosed with a rare liver condition known as "biliary atresia" which causes a blockage in the ducts that would usually drain bile from the liver. Initially Riley underwent a Kasai procedure to treat her condition, a surgery designed to redirect bile from the liver into the intestine, however after experiencing complications she was recommend for a liver transplant.

In late 2020, the Swander family got the call they were waiting for and their little girl received a new liver. This brought great relief to Riley's parents Katrine and Rob but it was short lived as Riley's body rejected the organ. "We were thinking this is going to change her life but unfortunately, every parent's worst nightmare happened, and it was not successful," Katrine recalled.

Determined to find a solution, in early 2021 the Swander family looked into live donation and found that Rob was the same blood type as his daughter. In another turn of events, on the day of his surgery to remove part of his liver, Rob received a call that Riley was a match for a deceased donor liver transplant.



"I wasn't expecting it to be the call that it was, and when I finally did talk to the nurse co-ordinator it was just life-changing," he said. Riley now leads a happy and healthy life and her family are forever thankful to her donor, "we are so mindful of the families on the other side, knowing that they were going through something awful but were courageous enough to give us this gift of life," Katrine remembers.

Pictured Above: Riley Swander and her mother, Katrine

BIENCO GLOBAL LAUNCH—MRFF GRANT UPDATE

As the MRFF Research Program continues, the NSW Organ and Tissue Donation Service reflects on the achievements of the project within the last three months.

The Consortium officially launched as BIENCO, the 'BioENGINEERED Cornea' initiative, on the 16th of December at the Sydney Eye Hospital with the proceedings officiated by the NSW Minister for Health and Medical Research, Brad Hazzard.

BIENCO has provided the first progress report to the Commonwealth and has received endorsement for the second half of the initial project period.

BIENCO has been busy progressing the cell culturing, material assessment, and integration methods required to 'build' the cornea from the individual bioengineered layers and

components shared across the program. To ensure that BIENCO hits the mark with the bioengineered cornea, a suite of tests to verify the end product is also nearing completion.

The next task for the BIENCO group will be workshop and draft the 'Round Two' application. This includes both the delivery of the project objectives to have a viable prototype and animal trial at the ready, and a further five years' worth of business and scientific activity to refine the products and achieve the end goal of a commercially viable bioengineered equivalent to traditional cornea grafts.

BIENCO will bioengineer a total cornea as well as partial thickness grafts for transplant reducing the amount of donor tissue required, significantly improving cost effectiveness and sustainability of corneal treatments in Australia and increasing access to vision restoring corneal replacement surgery across the globe.

[Click here](#) to access the new BIENCO website and stay up to date with the latest progress.

Pictured Above: On the left NSW Minister for Health and Medical Research, Brad Hazzard with Professor Gerard Sutton, Project Lead, Corneal Specialist and Co-Medical Director of the NSW Tissue Bank.



RENAL PATIENT'S IMPRESSIVE MILESTONE

After being told she was “just a teenager who wants attention” from her GP when she was 16 and felt sick all the time, Karen Diamond lives to tell the tale of her kidney transplant an incredible 40 years later.

“I was vomiting, I had headaches like you wouldn't believe and I just had no energy” recalls Karen, however it wasn't until her 20s that she got referred to a specialist and had blood tests. Shortly after this, it was discovered that Karen had medullary cystic kidney disease, an inherited condition that causes the growth of cysts in the kidneys and eventually causes them to fail. Karen was taken straight to ICU and started on peritoneal dialysis before having her first transplant in 1980. Unfortunately the organ was rejected and despite being reluctant, Karen had her second transplant at St Vincent's in Sydney and it has lasted for 40 years and counting.



The symptoms of kidney disease can be very nondescript and similar to Karen's case be dismissed for other sicknesses. Symptoms can include lack of energy, swelling, breathlessness and poor concentration with more serious signs only becoming evident when a person has less than 25 percent kidney function. High risk groups such as people with diabetes, hypertension and vascular disease as well as people who smoke or are First Nations peoples should be screened for kidney disease.

Karen now lives in Wardell in Northern NSW and is looked after by the St Vincent's Private Hospital team in Lismore. “The care I've received at St Vincent's means everything to me”, Karen said. “If there is one message I could give people, it's please consider donating your organs. Please talk to your family about your wishes. I get a bit teary thinking about how much it can change someone's life. It is just the best present you can give someone.”

Pictured left: Karen Diamond, kidney recipient

STAFF UPDATE

Meet—Vanessa Terpos, Manager Clinical Governance and Quality

Vanessa's role provides leadership and strategic direction in relation to all things clinical governance, quality management and safety at the OTDS.

Meet—Alexandra Viglianti, Procurement & Production Team Leader for the NSW Tissue Bank

Alexandra's role is critical to ensure effective, efficient and efficacious tissue procurement and production practices.

DONATELIFE PODCAST SHOWCASES CORNEAL DONATION

'Let's Talk Organ and Tissue Donation', a new 14 episode podcast released by DonateLife Victoria, shines a light on the personal experiences of organ and tissue recipients, donor families, living donors, and expert medical and nursing specialists to help raise awareness about organ and tissue donation.

The series is hosted by Bendigo's hit91.9 radio presenter, Michael Billings, who lost his father while on a transplant waiting list. "After losing my father before he had an opportunity to receive a liver transplant, I have learnt there are so many facets to organ donation," said Mr Billings. "The one thing that never ceases to amaze me is the selflessness of families who choose to think of others amidst their own grief. It's the greatest act of generosity."



In Episode 13, Michael sits down with Melbourne's Lions Eye Donation Service Director, Dr Graeme Pollock OAM. Since helping establish the service 30 years ago, Dr Pollock has been at the helm for thousands of corneal transplants. In this captivating episode, Dr Pollock discusses the finer details behind eye donation and shares anecdotes from his fascinating career including a re-transplantation surgery on a patient whose corneas were estimated to be at least 120 years old having had her transplant in 1953 from a donor who was then aged in his 70s.

For someone with a damaged cornea, a corneal transplant is often their last hope of restoring vision. Like organ donation, this sight-saving operation is only possible thanks to the decision of a donor and their family.

To listen to this episode and to the other incredible stories about organ and tissue donation, [please click here](#).

AUSTRALIA'S FIRST 'REVIVED' KIDNEY TRANSPLANT

In an Australian first, Westmead Hospital clinicians alongside Westmead Institute for Medical Research (WIMR) researchers have performed a successful transplant of a 'revived' kidney – a cutting-edge medical approach that could allow many more kidneys to be viable for transplant.

Currently donor organs are stored on ice prior to transplantation and this storage time can impact their ability to work immediately after transplantation. The new process, known as normothermic machine perfusion (NMP) involves supplying the donated organ with red blood cells and oxygen at body temperature, essentially resuscitating the kidney's damaged cells. *Cont...*



Pictured Above : Kidney recipient Folio Emelio with Surgeon Dr Henry Pleass

The WIMR research team sought to find a way to rejuvenate a damaged kidney using NMP with the research project carried out by Dr Ahmer Hameed as a part of his PHD. Dr Hameed explains that a TGA-Approved NMP device is expensive, so the WIMR together with Westmead Hospital sourced spare machine parts. He said, “With the help of the hospital, bio-engineers and some duct tape, we were able to make a machine perfusion system suitable for our initial research. For this pilot stage, we sought to prove the feasibility and safety of the procedure. We were able to access donated kidneys that had been damaged to the point where they could not be transplanted, and we demonstrated in the lab that NMP could resuscitate these kidneys. Not only this, but the NMP technique seemed to improve kidney quality over time, so the kidney worked better and straight away.”

Two kidney transplants utilising this new technology have been conducted at Westmead Hospital and Senior Transplant Surgeon Dr Henry Pleass details this advancement in technology as “the first major change in 25 years. You can take a kidney that looks damaged, purpled and mottled and you put it on the machine and within minutes it looks like a perfect, healthy pink kidney.”

Sydney resident Folio Emelio, 64, was the first of two patients to receive one of the specially-treated donor kidneys ending nearly seven years of dialysis for 15 hours every week. “I really appreciate what the doctors have done for me,” Mr Emelio said. “I feel great. Everything is going well. I am so grateful to all the doctors and the Australian Government for supporting this research”.

Both Folio and the other recipient were doing well at their three month post-surgery consults and have good kidney function avoiding the need for post-operative dialysis.

Professor Wayne Hawthorne, who leads WIMR’s Preclinical Studies of Islet Transplantation Group, hopes this research can “address the urgent issue of significant wait times for kidney transplants. There are currently more than 1,000 people in Australia waiting for a kidney transplant. Sadly, while the average wait time is around three and half years, it can be as long as seven years. Despite this, more than 8% of retrieved kidneys in Australia each year, are deemed unsuitable to transplant.”

UPCOMING EVENTS

Tissue Awareness Week— Commencing on the **11th of April**, the inaugural Tissue Awareness Week will feature a social media campaign focused on tissue donation in Australia and encourage donor registration on the Australian Organ Donor Register.

DonateLife Week 2022— The national awareness campaign for organ and tissue donation, DonateLife Week, will take place this year from **Sunday 24th July – Sunday 31st July**. Information and resources will be made available on the [DonateLife website](https://www.donatelife.org.au) in the lead up to the awareness week.

Contact Us

Please contact the NSW Tissue Bank on 02 9382 7855 if you have any questions.