



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 2021



Welcome to the March 2021 edition of the NSW Tissue Bank Newsletter

2020 ORGAN AND TISSUE DONATION OUTCOMES RELEASED

In early February, the 2020 national figures for organ and tissue donation were announced by the Organ and Tissue Authority.

The data shows that while Australia's donation rate has doubled over the past decade, the national program took a hit in 2020 due to COVID-19. This was largely due to the suspension of elective surgery and the precautionary steps taken in late-March through to early-May to suspend some living and deceased transplant programs before resuming as normal.

As a result, there was a 12% reduction in the number of people receiving a transplant and a 16% decrease in organ donors nationally, compared to 2019. Despite the decrease, the 2020 data exceeds earlier predictions, which serves as a testament to the highly-skilled and dedicated donation and transplantation staff in NSW and across the country.

The report reveals that 2,277 Australians lives were transformed through corneal transplantation in 2020. In NSW, there were 653 corneal transplants made possible by the generosity of 368 deceased eye donors, an 11% decrease from the previous year.

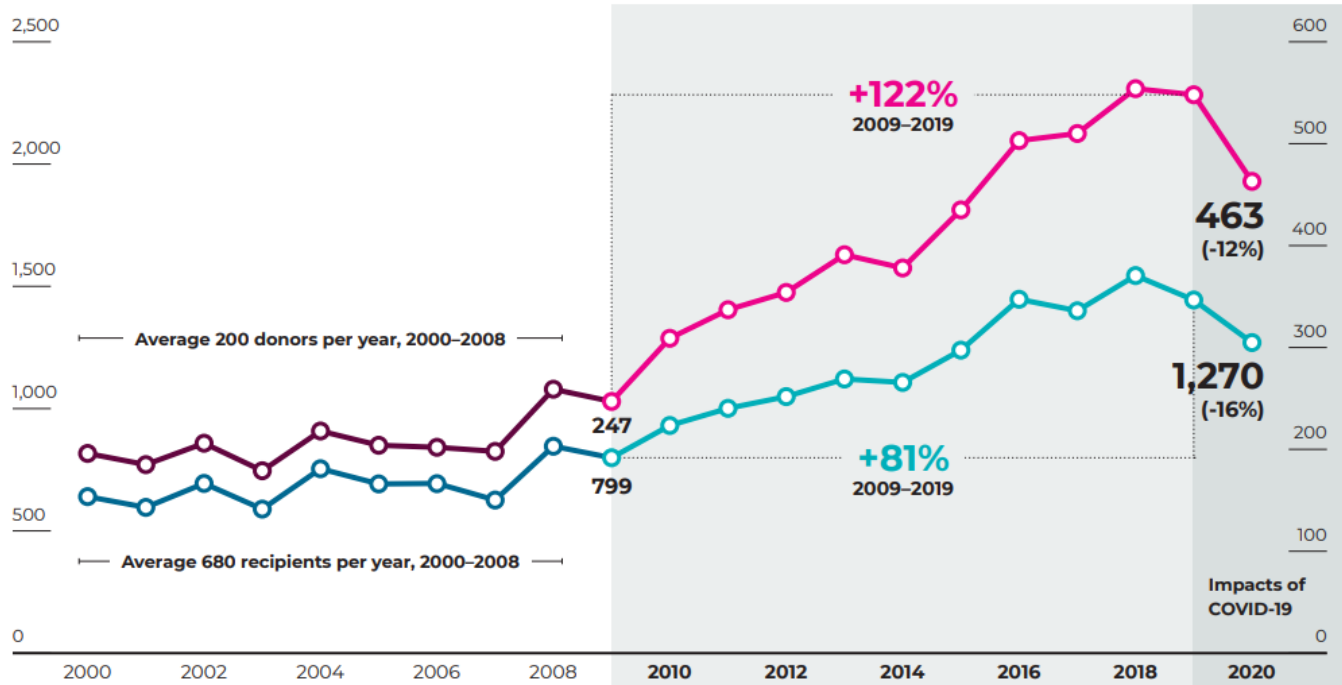
[This article by Insight News](#) comments on the impact COVID-19 had on corneal transplantation across Australia and the resilience shown by the tissue donation and transplant sector.



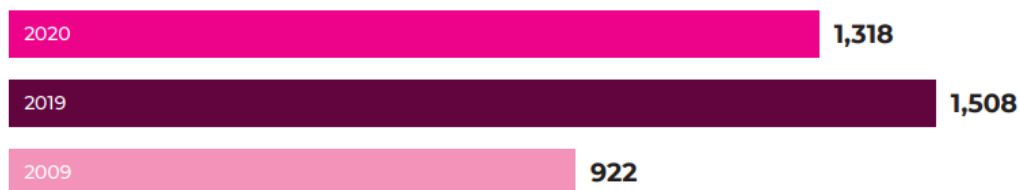
The NSW Tissue Banks incorporating the Lions NSW Eye Bank, NSW Bone Bank and Australian Ocular Biobank, acknowledges the outstanding generosity and long term support of the Lions NSW-ACT Save Sight Foundation.

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*Deceased organ donation and transplant recipients in Australia 2000-2020***Transplant recipients****Deceased organ donors***Eye donation and transplantation in Australia***Deceased eye donors**

2020 | 2019 | 2009

**Corneal transplants**

2020 | 2019 | 2009



Head to the DonateLife website to access the full [2020 performance report](#).

Contact Us

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

AMNION DONATION PROGRAM FEATURES ON CHANNEL 9

Channel 9 made a visit to the skin and amnion lab to film and interview Dr Con Petsoglou for a good news story about the NSW Tissue Bank's innovative amnion donation program.

Amnion donation is a unique living donation program, whereby women having an elective caesarean section can agree to donate their placental tissues including the amnion, which would otherwise be discarded.

Established by the NSW Organ and Tissue Donation Service, the amnion donation program launched in late 2018 and is the first in NSW, and currently the only of its kind in Australia.

Dr Con Petsoglou, Ophthalmologist, Cornea Specialist and Associate Director for the NSW Tissue Bank, explains that the amniotic membrane is turned into a tissue graft and used as an open wound dressing, known as a biological bandage.

"Extensive scientific research shows that the amniotic membrane can have unique healing properties, and is an effective treatment option for serious wounds, eye injuries and burns as well as other topical applications," Dr Petsoglou said.

"Depending on the size of the amnion, up to thirty patients can be helped from just one donor."

Donated amnion from the program is being distributed nation-wide and the grafts have thus far been used by eye surgeons all over Australia.

The story featured new mum and amnion donor, Rikki Storey with her baby Rio, along with Dr Steven Tan, Obstetrician at the Mater Hospital, North Sydney who consents his patients to amnion donation.

[Catch the Channel 9 News segment here.](#)

Pictured: Donated amniotic fluid; baby Rio whose mother donated her amnion in December 2020.



UPDATE ON RESEARCH INTO OCULAR GRAFTS

The NSW Tissue Bank's Research and Development team are assisting with 3 significant research projects to develop new ocular grafts for ophthalmic surgery.

1. Corneal Biopen

Non-healing ulcers, corneal 'melts' and complications from laser refractive procedures can cause breaks or wounds in the epithelial or top layer of the cornea.

The team are researching the development of a bioengineered product called the 'biopen' that could 'fill in' these gaps in a safe and effective way.

2. Endothelial Cells

The endothelial cells on the inner most layer of the cornea are a single layer of cells that do not replicate. If the cells are damaged or die, vision can be impacted even if all of the other layers of the cornea are working.

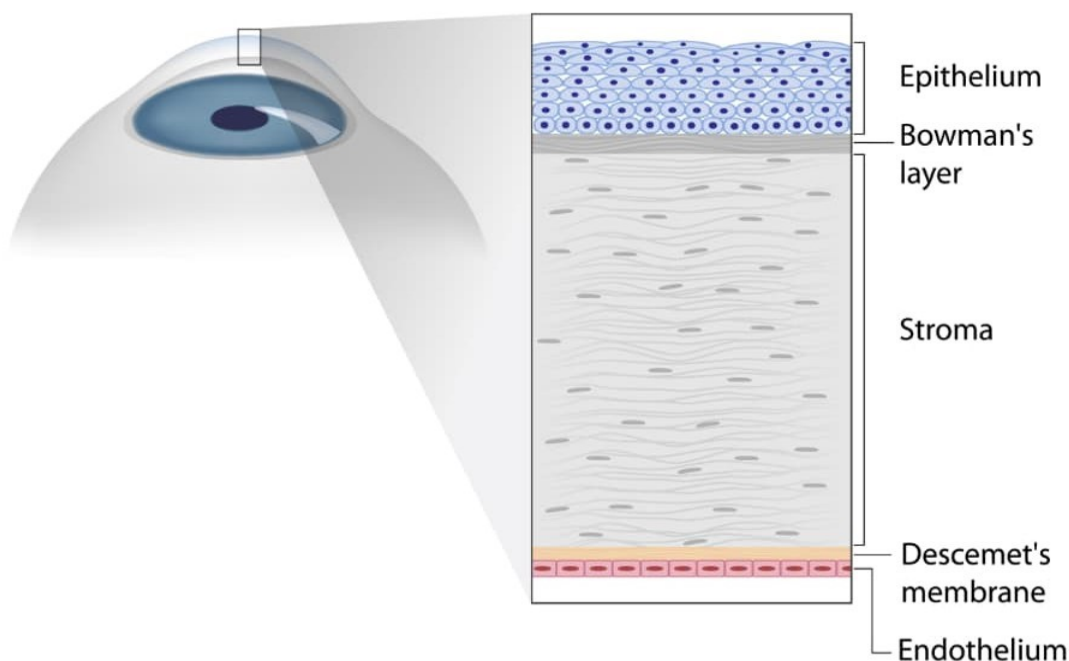
Rather than replace the whole cornea with a transplant, the aim is to inject endothelial cells into the eye to replace the damaged ones. This involves learning how to grow and nurture the endothelial cells from donor tissue in the lab.

3. 3D Printed Cornea

Some recipients experience a greater risk of rejecting a full thickness (all layers) or partial layer corneal transplant. Some areas in the world have little to no access to donor tissue to address corneal blindness.

The research undertaken by the Research and Development team intends to assist with development of a 3D printed cornea with all 3 layers seeded with donor cells cultured or multiplied in a lab. This requires each layer of the cornea to be developed individually in collaboration with research groups in Victoria, Queensland and NSW.

Pictured: Diagram of the cornea



LIONS INTERNATIONAL EYE BANK WORKING GROUP

The NSW Tissue Bank has joined 30 Lions eye banks to develop an International Working Group, with members from America, Australia, Brazil, Germany, Italy and Turkey.

The Lions Eye Bank Working Group has been divided into four sub committees, which will all meet quarterly.

- Eye Banking Operations Support and Emerging Eye Banks
- Purchasing and Logistics
- Advocacy and Legislation
- LCI Brand and Mission: Marketing and Communications

The aim of the International Working Group is to help Lions eye banks thrive, bringing visibility to the Lions brand and providing a vital service to their communities.

WELCOMING NEW STAFF AT THE TISSUE BANK

The NSW Tissue Bank is pleased to welcome five new staff members; Sarah, Sharan, Niamh, Savannah and Sally.

Meet Sarah - Quality Consultant

I hold a Forensic Science (Chemistry) Degree and have worked in a Pharmaceutical company (GlaxoSmithKline Consumer Healthcare) for the past 16 years specialising in Solids and Liquids Dose Manufacturing Processes, Validation and Quality. I joined the NSW Tissue Bank in mid-January as part of the Quality team and am hoping my experience in the Pharmaceutical industry can offer the team new insights.

Meet Sharan - Production and Procurement Officer

I completed my Bachelors of Science at the University of Sydney and Masters of Medical Science Pathology from Charles Sturt University, while simultaneously working in NSW Health Pathology as a Medical Lab Scientist Trainee and later, Medical Technical Officer rotating through Biochemistry, Blood Bank, Genetics, Haematology and Microbiology.

Meet Savannah - Production and Procurement Officer

I've joined the NSW Tissue Bank in the Production and Procurement Officer role, working as part of a great team committed to retrieving and processing tissue.

Meet Niamh - Tissue Donor Coordinator

My name is Niamh and I come from Dublin, Ireland. I have an honours degree in Biomedical Science specialising in Haematology and Transfusion medicine. While in Ireland, I worked in the Blood Bank at St. Vincent's University Hospital Dublin. Linked to the blood bank was a Tissue Establishment, where I spent time processing and reinfusing autologous stem cells.

I moved to Australia in late 2013, where I applied my clean room experience to the processing of bone and soft tissues. I worked in the processing industry for six years before welcoming my son in 2019. I look forward to growing and learning with the team and opportunities to share and apply my past experience and knowledge with the NSW Tissue Bank.

Meet Sally - Tissue Donor Coordinator

I have a Master of Science in Medicine (Reproductive Health Sciences and Human Genetics) and a background of providing diagnostic and research genetic testing, nationally and internationally.

I look forward to working with the NSW Tissue Bank and OTDS in delivering quality health outcomes for all.

For interest, my research has been in idiopathic male infertility (Master's project) and paediatric leukaemia. Diagnostically, I have performed pre and post-natal cytogenetic testing, including oncology cytogenetics.

Pictured left to right: Sally, Savannah, Niamh and Sarah



ALL ABOUT BONE DONATION

Bone donation can dramatically improve a person's life. But how does it work?

Below are some commonly asked questions and answers about the living femoral head donation program, available through the NSW Tissue Bank.

Q: What is a femoral head and who can donate it?

A: The femoral head is the ball shaped piece of bone that sits at the top of your thigh and fits into your pelvis.

Anyone having a hip replacement who is aged between 15-90 can donate their femoral head, provided they pass the screening questions to determine their suitability.

Q: How does the donation process work?

A: When having hip replacement surgery, the femoral head is removed and usually discarded.

With the patient's consent, this bone can be donated and stored for transplant.

After the patient provides written consent, a blood test is taken at the time of surgery. This blood test forms part of the suitability testing. There are no additional surgical procedures, and there is no cost incurred by becoming a bone donor.

Q: How can it help people?

A: Bone transplantation is a rapidly growing and expanding field that has a significant impact on improving the quality of life for people in need. Bone transplantation is commonly used in orthopaedic, neurosurgical and plastic surgery. Bone donation can:

- Rebuild joints and allow adequate function
- Be used in spinal fusions for children to improve their ability to breathe
- Correct lower limb alignment, reducing pain associated with osteoarthritis
- Be used in reconstructive surgery, such as after a car accident
- Be used for orthopaedic research



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MUFFY'S CORNEAL TRANSPLANT STORY

A corneal transplant can make a remarkable difference to someone's quality of life – just like Muffy from Sydney.

Muffy started to lose her vision at a fairly rapid pace and a corneal transplant became the only viable option to save her eyesight.

"I first noticed that I couldn't drive at night because the lights blinded me and I had no sense of depth perception. With time I noticed that the world was starting to look cloudy all the time. My eyes were drying closed at night and the cornea seemed to 'tear' if I opened them too quickly."

Within two weeks of transplant, Muffy was already driving again.

A registered organ and tissue donor herself, Muffy is hugely grateful to her donor for giving her more time to spend with her two children. She feels that in some way her donor is alive and well in herself. "It's a beautiful gift to both give and receive," she says.

Pictured top right: Muffy, corneal recipient



VOLUNTEER PROGRAM REACHES MILESTONE

The NSW Organ and Tissue Donation Service volunteer program has reached a very special milestone, with just over 100 volunteers officially on-boarded into the program!

As part of the program, volunteers can take part in community activities, public speaking or media opportunities, with the aim to raise much needed awareness in their communities about organ and tissue donation.

Pictured bottom right: DonateLife volunteers Jayden, Claire and Mingjie



COMING UP... DONATELIFE WEEK 2021

The national awareness campaign for organ and tissue donation, DonateLife Week, will take place this year from **Sunday 25th July – Sunday 1st August**. Information and resources will be made available on the [DonateLife website](https://www.donatelife.org.au) in the lead up to the awareness week.