

2018

# Australian Donation and Transplantation Activity Report



**We thank and acknowledge** the generous Australians and their families who saved and transformed the lives of people needing a transplant through organ and tissue donation in 2018. We also acknowledge the dedication and commitment of our donation and transplantation specialists. Transplantation, and its life-changing benefits, would not be possible without this shared commitment to donation.

## Part 1 Organ donation and transplantation

**In 2018 Australia achieved a record number of organ transplant recipients as a result of more donors and their families agreeing to donate.**

The lives of 1,782 Australians were saved or improved through transplantation due to the generosity of 554 deceased and 238 living organ donors and their families.

In 2018



### Deceased organ donation and transplantation

#### A decade of growth

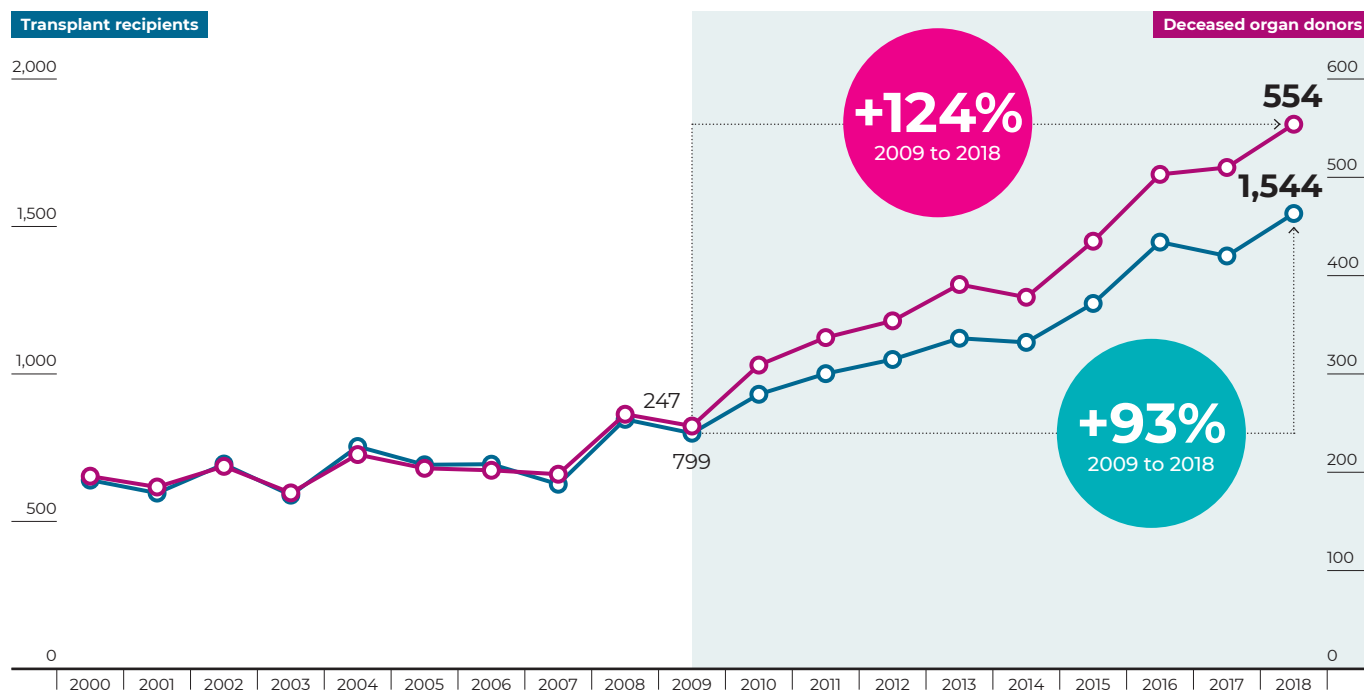
In 2018 Australia recorded a significant increase in life-saving and life-changing organ donations and transplants.

The 2018 outcomes show that Australia's national program to increase organ donation for transplantation is continuing to deliver strong results.

Since the program started in 2009, 4,018 organ donors and their families have given over 11,000 Australians a second chance at life through transplantation.

During the past decade, the number of donors has more than doubled – 554 in 2018 compared with 247 in 2009 – saving nearly twice the number of people through transplantation – 1,544 in 2018 compared with 799 in 2009.

### Deceased organ donation and transplant recipients 2000–2018



## Australia's potential deceased organ donor population and transplantation outcomes

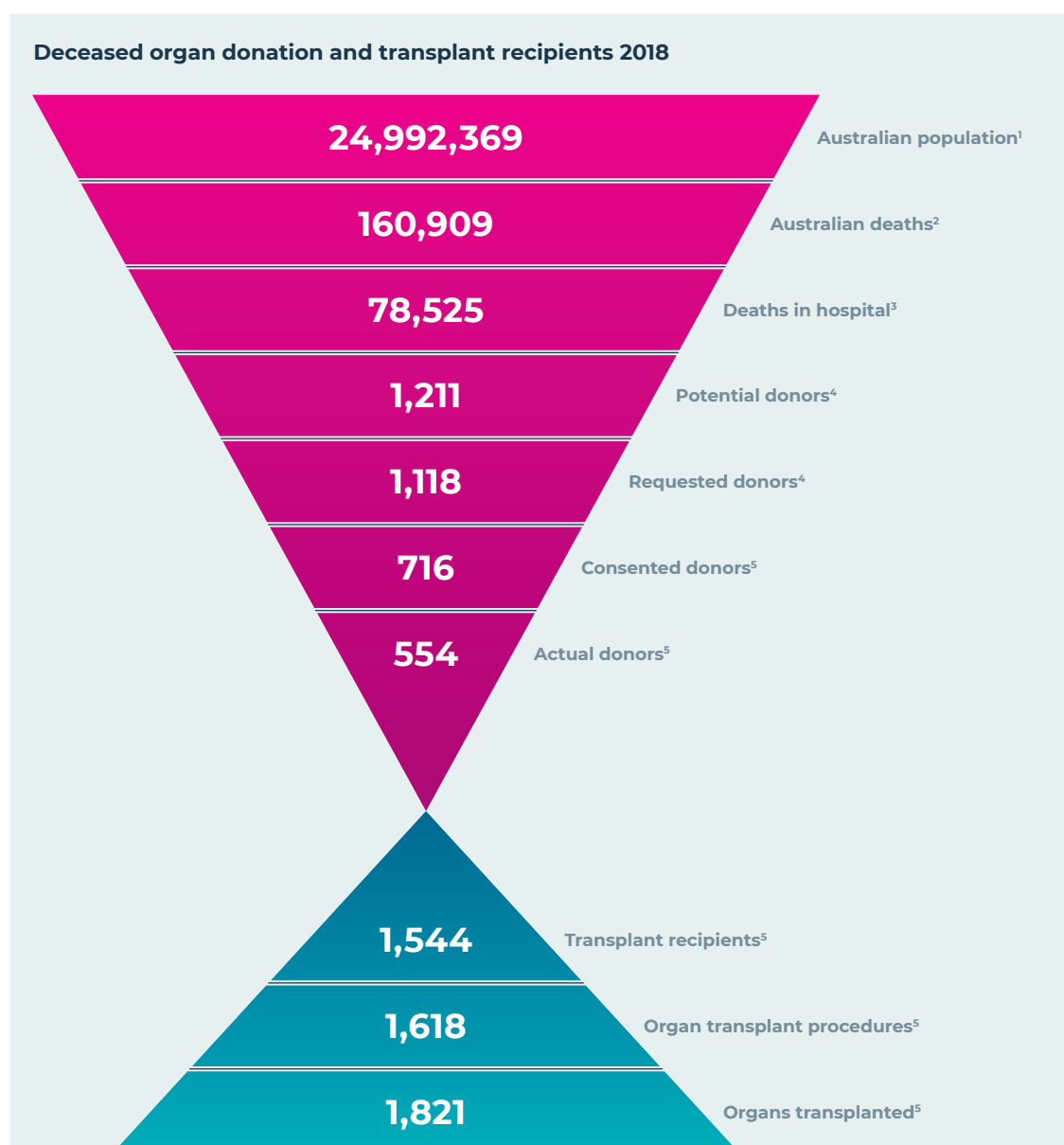
Donation is an infrequent event. Only 2–3% of people who die in hospital can become an organ donor as particular circumstances need to occur for a patient to be medically suitable to donate.

By way of example, in 2018, of 78,525 deaths that occurred in hospitals, approximately 1,211 potential donors were identified. Requests to families for donation were made in around 1,118 cases, with 716 families consenting to donation. Of those, in 162 cases donation did not proceed for a variety of clinical reasons.

The resulting 554 deceased organ donors saved and transformed the lives of 1,544 organ transplant recipients and their families.

With donation possible in so few cases, and with so many people needing a transplant, it is vital that we continue to increase donation.

Many more people can become eye and tissue donors as these can be donated following death in broader circumstances, including outside of hospital.



### Source

- <sup>1</sup> Estimated Resident Population 30 June 2018, ABS 3101.0 Australian Demographic Statistics, (released 20 December 2018)
- <sup>2</sup> ABS 3302.0 Deaths, Australia, 2017 (released 26 September 2018)
- <sup>3</sup> AIHW Australian Hospital Statistics 2015–17 (released 24 May 2018)
- <sup>4</sup> Estimated using DonateLife Audit Data (February 2019)
- <sup>5</sup> Deceased Organ Donation in Australia, Australia and New Zealand Organ Donation Registry, January 2019

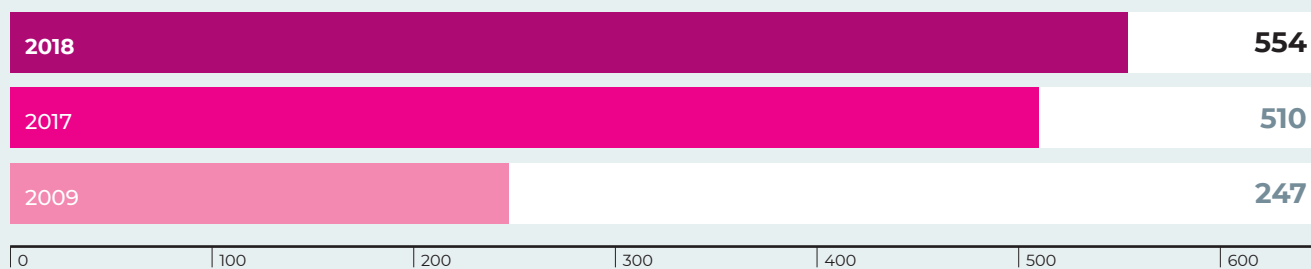
## Deceased organ donors and transplant recipients

In 2018 Australia achieved its highest number of organ donors.

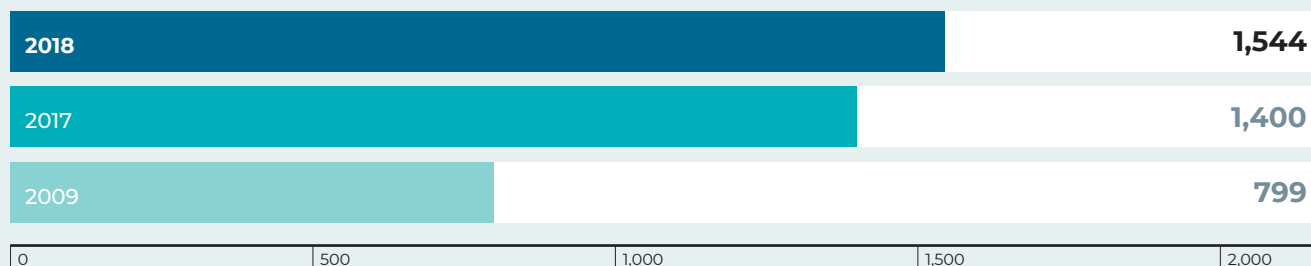
The lives of 1,544 Australians were saved or improved through transplantation due to the generosity of 554 organ donors and their families.

This represents a 9% increase in the number of donors and a 10% increase in the number of transplant recipients compared with 2017.

### Deceased organ donors 2009, 2017 and 2018



### Transplant recipients 2009, 2017 and 2018

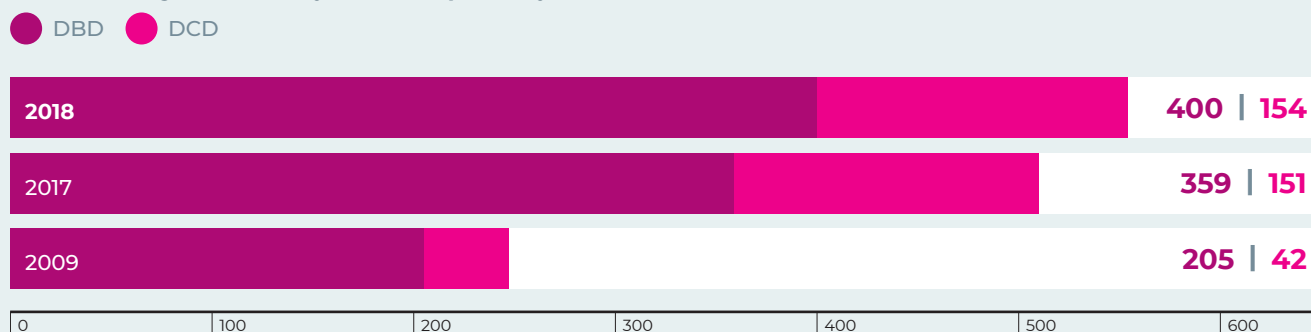


## Deceased organ donors by donation pathway

There are two pathways to deceased donation: Donation after Brain Death (DBD) and Donation after Circulatory Death (DCD).

In 2018, 400 donors (72%) came from the DBD pathway, with 154 (28%) from the DCD pathway.

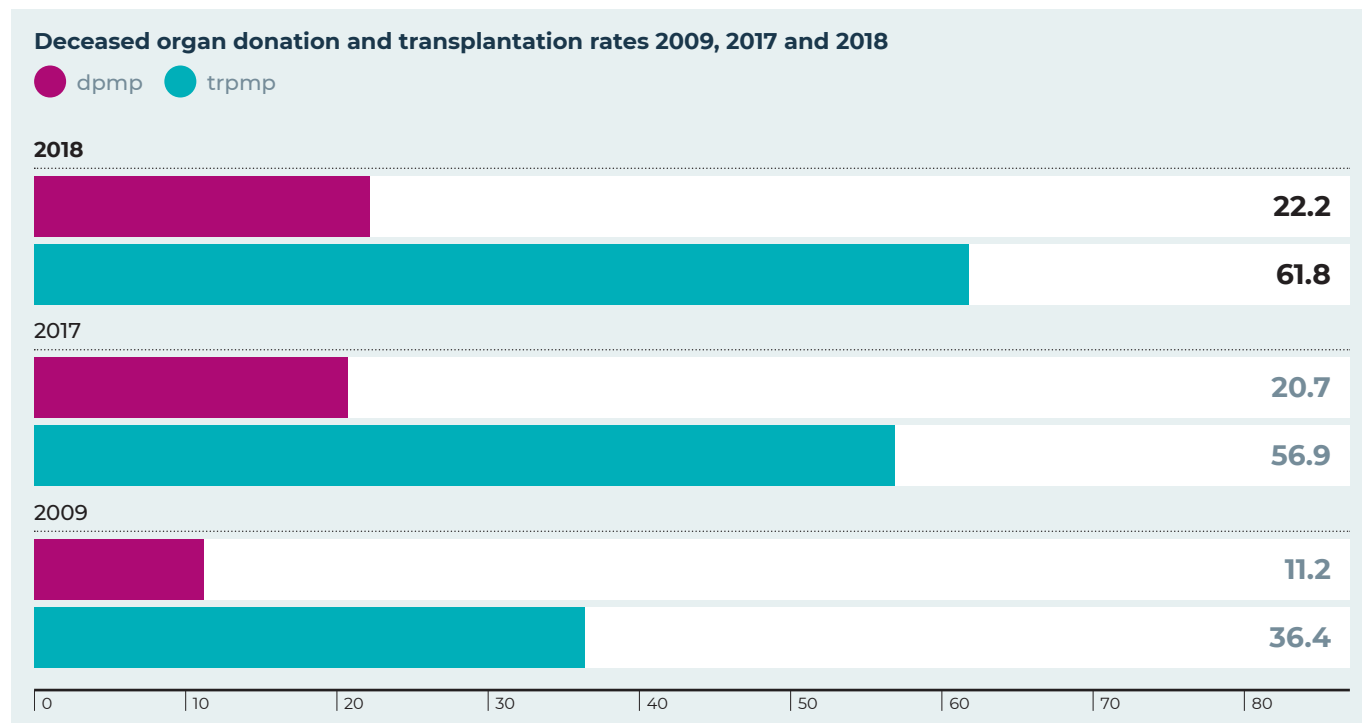
### Deceased organ donors by donation pathway 2009, 2017 and 2018



## Deceased organ donation and transplantation rates

The 554 organ donors in 2018 resulted in a national donation rate of 22.2 donors per million population (dpmp). This result is a significant increase over the 2017 outcome of 20.7 dpmp.

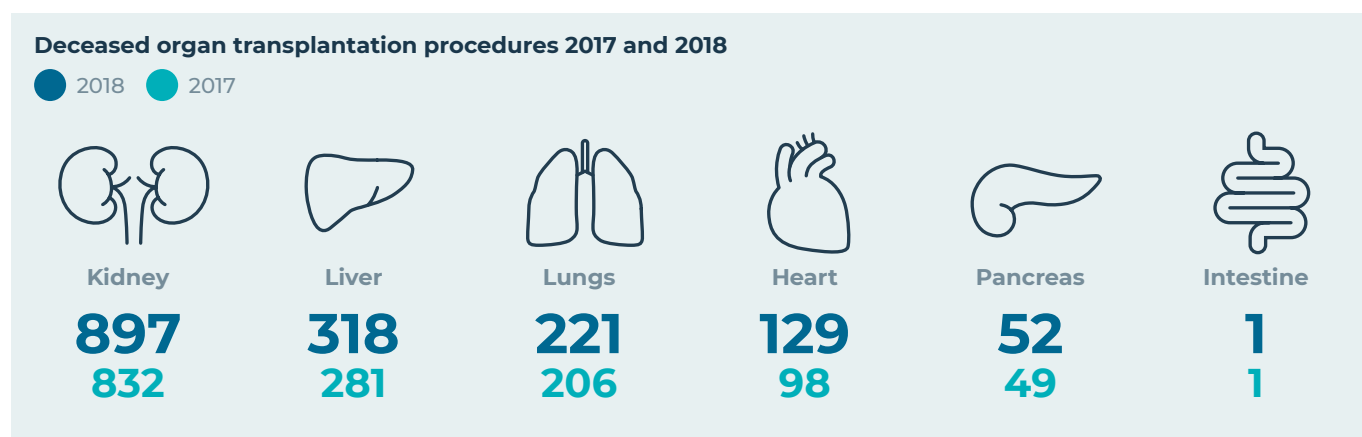
The transplant rate was 61.8 transplant recipients per million population (trpmp); higher than the 2017 outcome (56.9 trpmp).



## Deceased organ transplant procedures

In 2018 there were 1,618 organ transplant procedures. The number of transplantation procedures for each type of organ increased compared with 2017.

Kidneys were the predominant organ donated and transplanted, followed by the liver, lungs and heart.

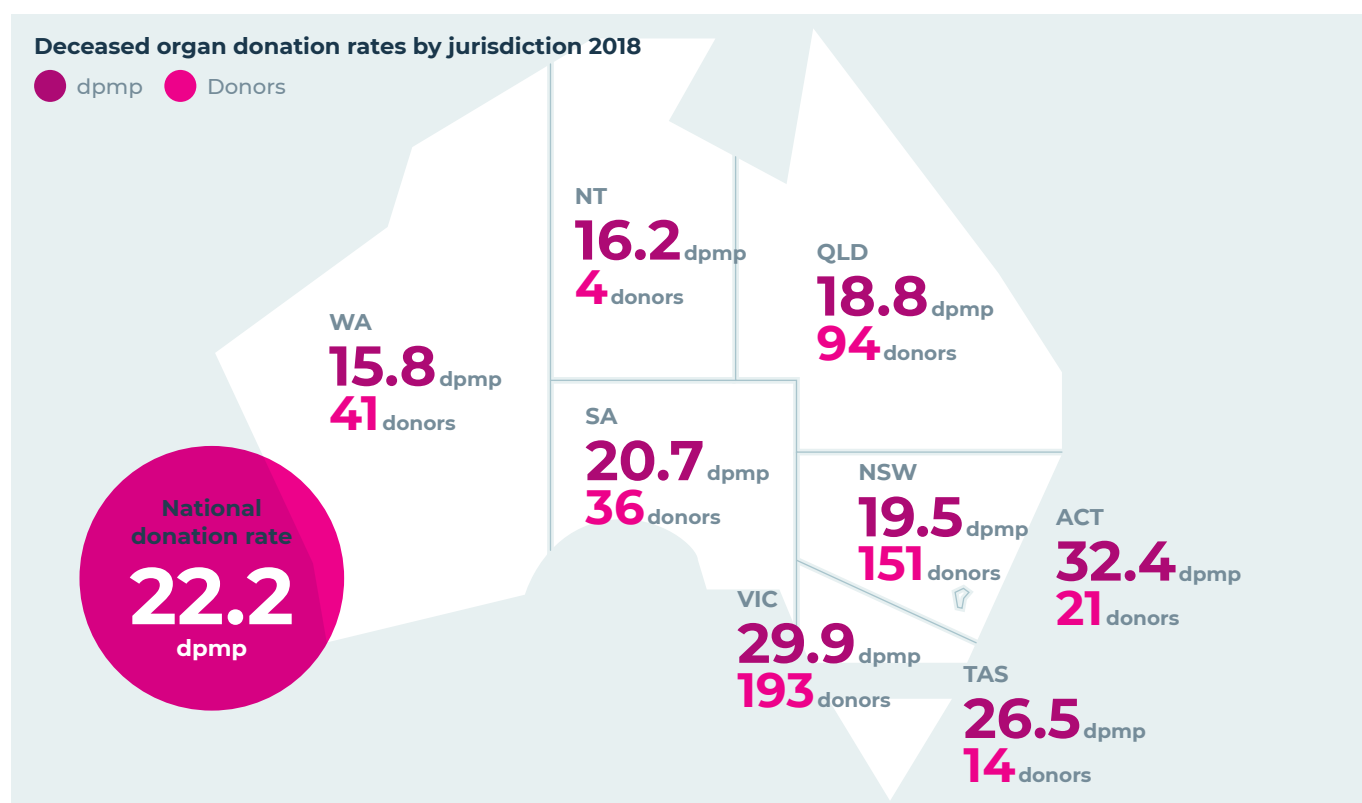
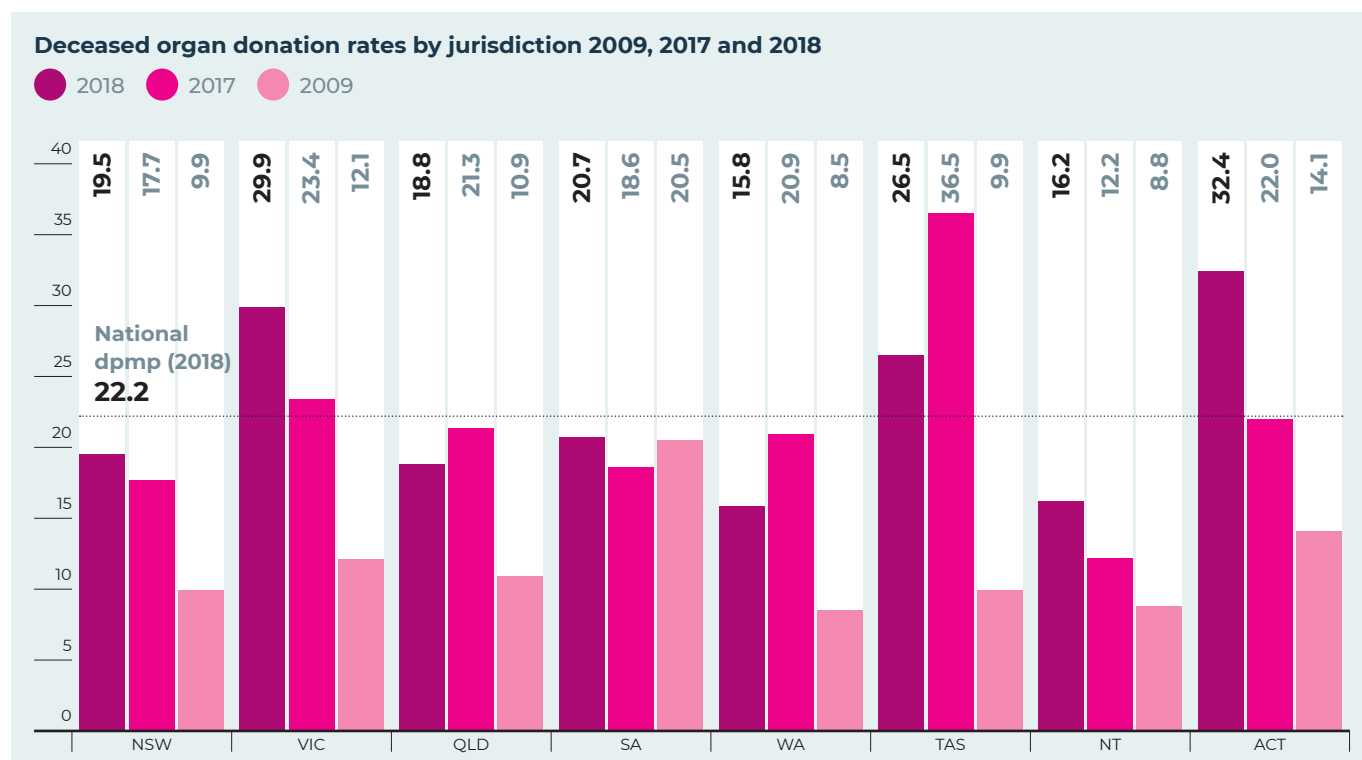


## Deceased organ donation rates by jurisdiction

States and territory outcomes in 2018 continued to demonstrate variation with annual donation rates ranging from 15.8 dpmp to 32.4 dpmp.

The Australian Capital Territory was the leader in donation outcomes, achieving a donation rate of 32.4 dpmp, followed by Victoria (29.9) and Tasmania (26.5). Each of these jurisdictions exceeded the 2018 target of 25 dpmp.

The relatively small populations of the Northern Territory, the Australian Capital Territory and Tasmania can result in significant fluctuations in outcomes and donation rates from year to year.



## Consent rates

### National consent rate

In Australia, families of potential donors are asked to confirm if their family member wanted to be a donor. Increasing the national consent rate is critical to increasing the donation rate.

One of the key factors driving the increase in donations in 2018 was the significant rise in the consent rate compared with 2017 – from 59% in 2017 to 64% in 2018 – the highest rate ever recorded.

#### National consent rate

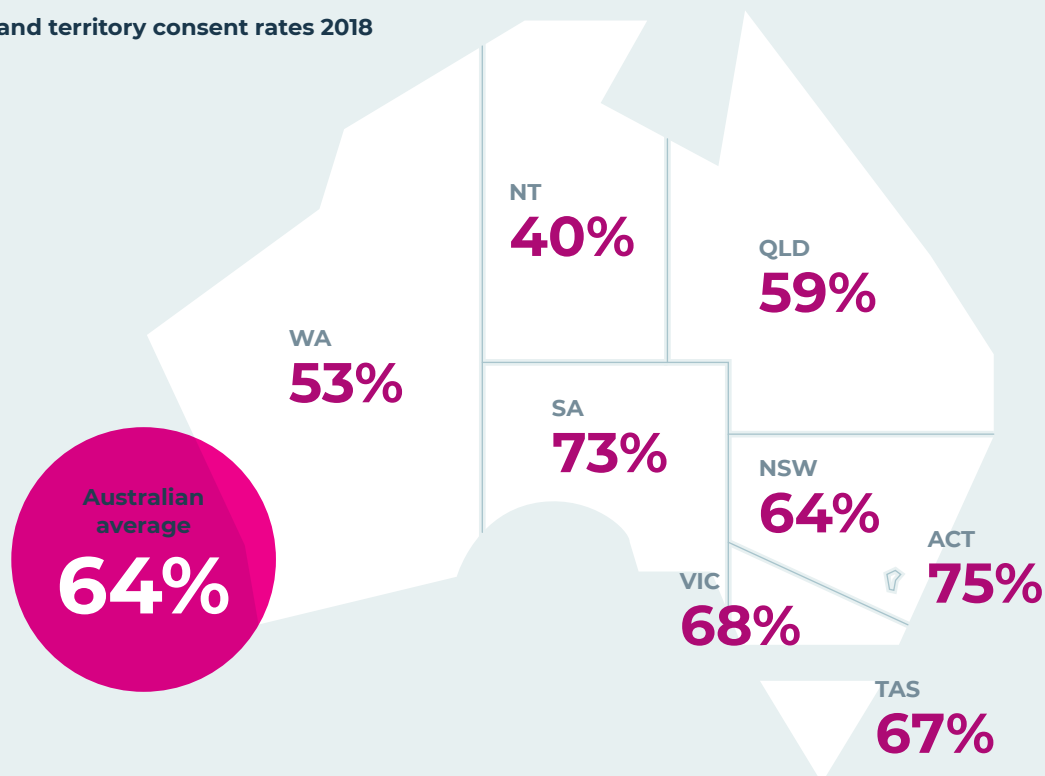


This increase in the consent rate was the result of our dual efforts to increase registration and family discussion about donation and to increase the involvement of trained donation specialist doctor or nurse in the family donation conversation in hospital.

### State and territory consent rates

There was significant variation in consent rates across the states and territories in 2018. Clinical practices, demographics and case mix may impact state and territory consent rates.

#### State and territory consent rates 2018



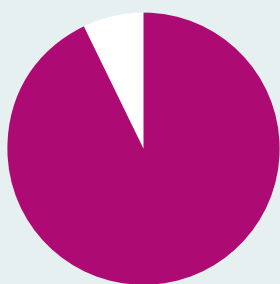
## Registration and family discussion makes a difference

Consideration of organ and tissue donation comes at an intensely emotional time for families. Registration and family knowing their loved one wanted to be a donor makes a major difference when families are faced with the situation of being asked to agree to donation.

Adult Australians (16 years and over) can register to be a donor on the Australian Organ Donor Register (AODR).

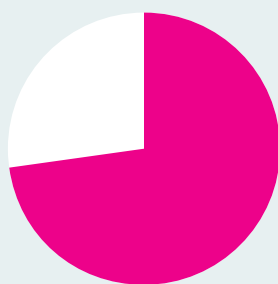
In 2018, 9 out of 10 families agreed to donation when their family member was on the donor register. Consent for donation was given in 7 out of 10 cases when the family had prior knowledge of their loved one's wishes. This dropped to 5 out of 10 families agreeing to donation when the family was unaware of their wishes.

### The importance of registration and family discussion



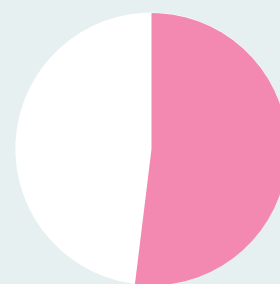
**93%**

Families agreed to donation  
when their family member was  
registered on the AODR



**73%**

Families agreed to donation  
when they knew their family member  
wanted to be a donor

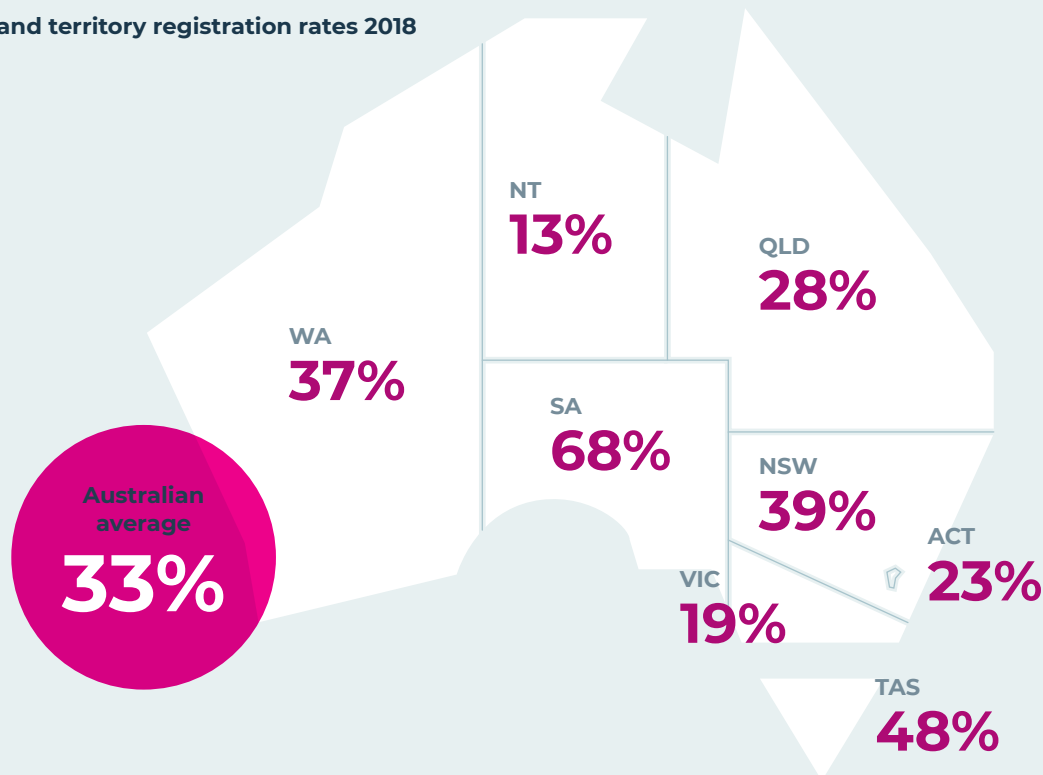


**52%**

Families agreed to donation  
when their family member was  
not registered and had not  
discussed donation

We can continue to increase consent rates if more Australians register and discuss their donation decision.

### State and territory registration rates 2018



## Involving trained donation specialists makes a difference

Organ and tissue donation is now firmly embedded in our health system with over 275 donation specialist nurses, doctors and support staff covering 95 hospitals across Australia. The donation specialists work with hospital critical care teams to ensure that, when appropriate, the opportunity for donation is offered to families.

A key factor to increasing consent is ensuring that donation is always raised by a trained donation specialist nurse or doctor, and families are provided with high quality care during the donation process.

In 2018, nearly 8 out of 10 Australian families agreed to when they were supported by a trained donation specialist doctor or nurse. This dropped to less than 5 out of 10 when there was no trained specialist involved.

### The importance of involving a trained donation specialist in the family donation conversation



The Organ and Tissue Authority funds specialist communication training for donation specialist doctors and nurses involved in the family donation conversation so that they can support families when the opportunity for donation is discussed.

## Living organ donation and transplantation

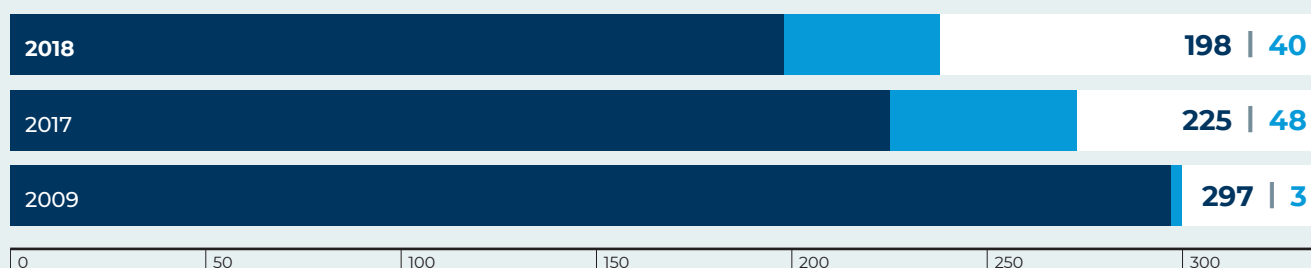
There were 238 living donors in 2018 – all kidney donors. This is a 13% decrease from 2017 (273) and a 21% decrease since 2010 (300).

The living kidney donors in 2018 included 40 through the Australian Paired Kidney Exchange (AKX) program, resulting in a total of 286 live kidney transplants since the program began in 2010.

The AKX program increases live donor kidney transplants by identifying matches for patients who are eligible for a kidney transplant and have a living donor who is willing but unable to donate because of an incompatible blood type or tissue type.

### Living donors 2010, 2017 and 2018

● Living donors (minus AKX) ● AKX donors





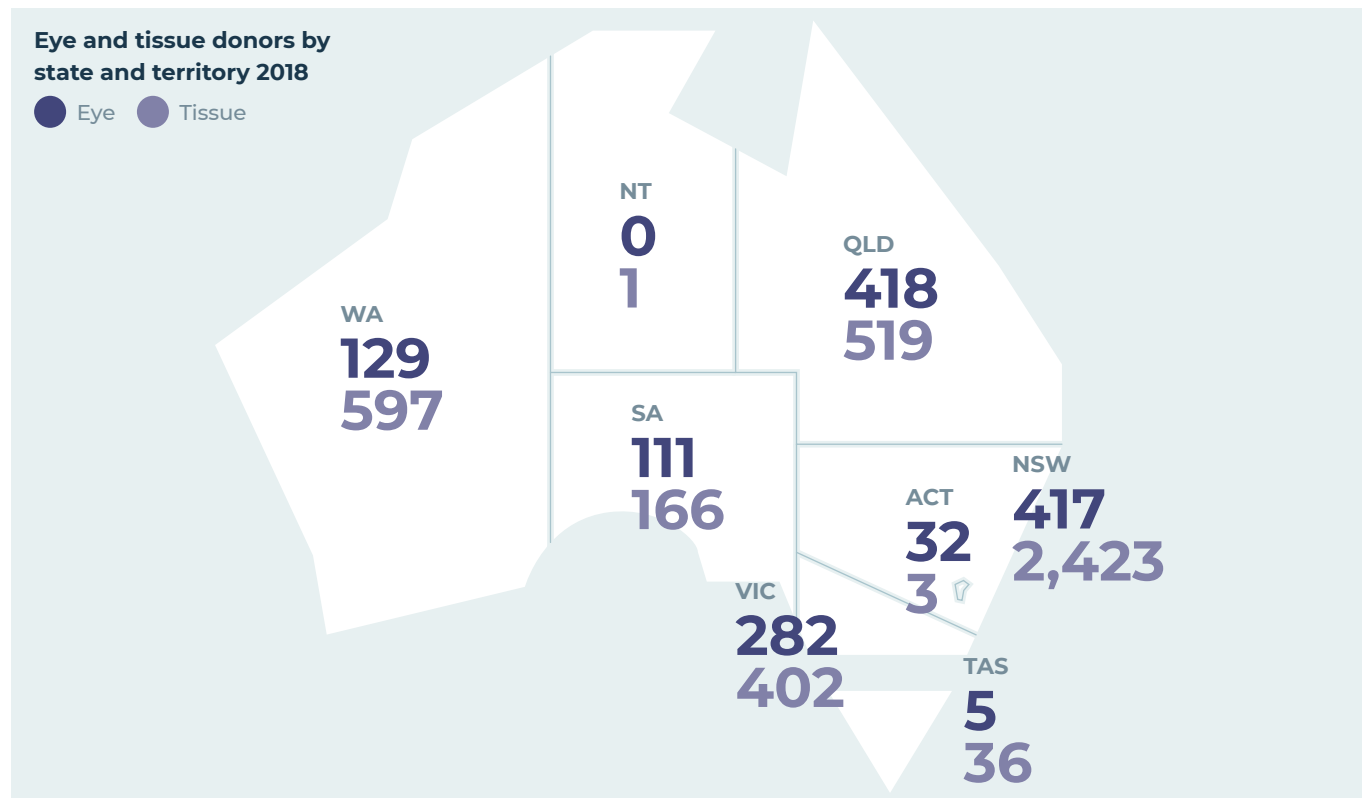
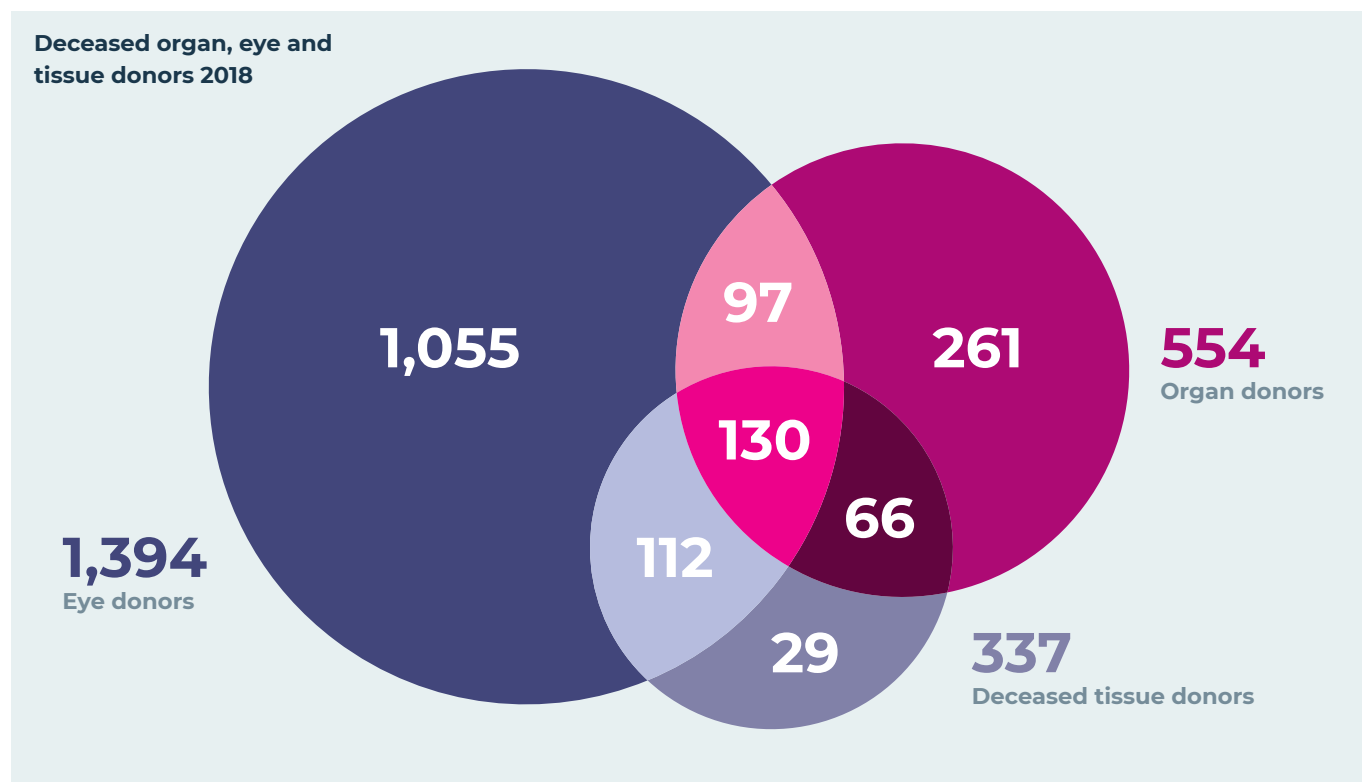
## Part 2 Eye and tissue donation and transplantation

Each year the lives of thousands of Australians are transformed through the transplantation of donated tissues. The tissues that can be transplanted include heart valves and other heart tissue, bone, tendons, ligaments, skin and parts of the eye such as the cornea and sclera. Tissue and eye banks across Australia separately provide outcome data.

Many more people can become eye and tissue donors as tissues can be donated up to 24 hours after death regardless of where death occurred.

In 2018 over 10,500 Australians benefited from eye and tissue donation.

Of the 554 deceased organ donors, 293 also donated eye and/or other tissue.

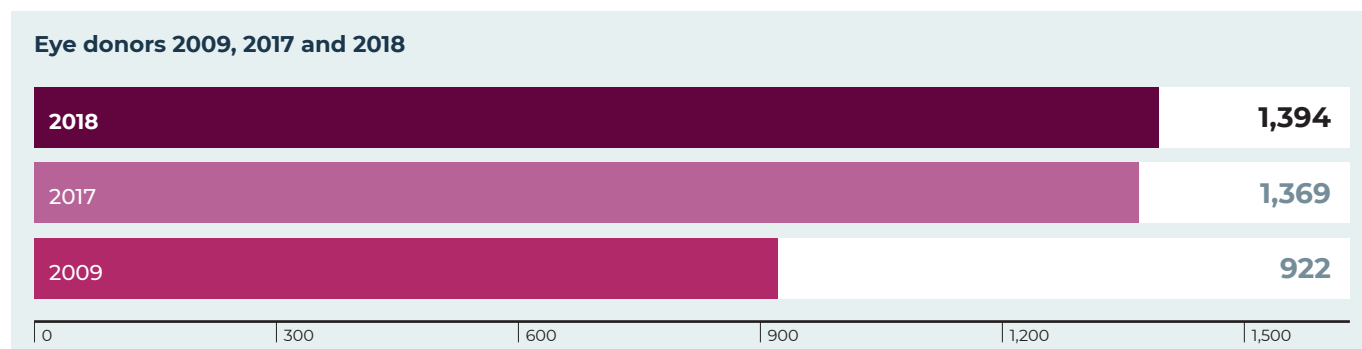


## Eye donation and transplantation

### Eye donors

In 2018 there was a record 1,394 eye donors. This is a 2% increase in the number of eye donors compared with 2017 (1,369) and a 51% increase since 2009 (922).

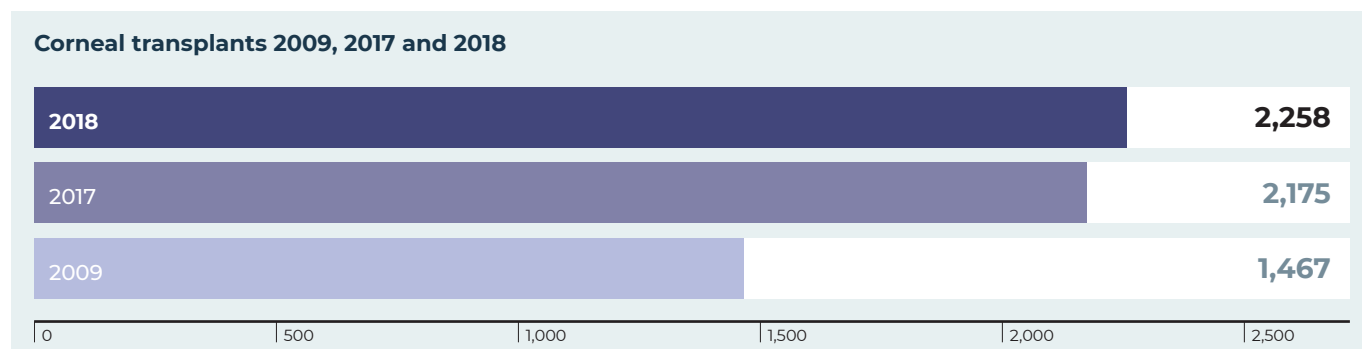
Eye donation continued to meet demand in 2018. Clinical experts anticipate the number of donors and corneal transplants to remain relatively constant.



### Corneal transplants

There was also a record number of corneal transplants in 2018 (2,258) with a 4% increase compared with 2017 (2,175) and a 54% increase over 2009 (1,467).

Since 2009, more than 19,000 Australians have received a corneal transplant.



## Tissue donation and transplantation

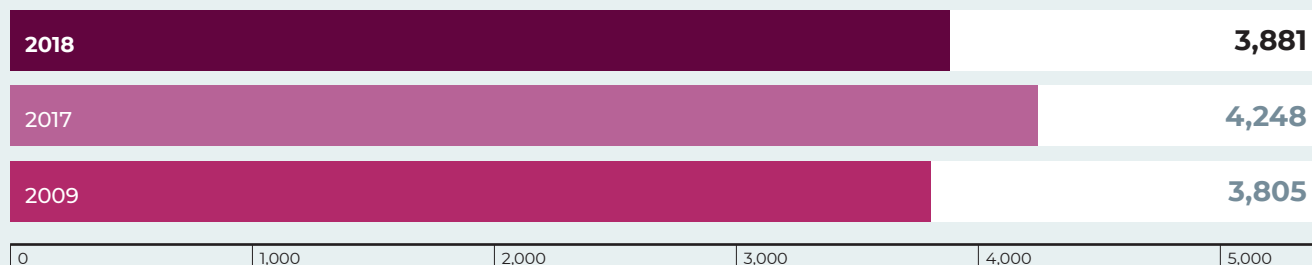
The 4,147 tissue donors in 2018 comprised 92% living tissue donors (3,810) and 8% deceased tissue donors (337). While this is an 8% decrease compared with 2017 (4,521), the long term trend is one of growth with a 3% increase since 2013 (4,032), the year national tissue donation and transplantation data was first reported.

In contrast with eye tissue donation, the demand for other tissues far exceeds the number of donations made.

## Living tissue donations

The 3,810 living tissue donors in 2018 resulted in 3,881 living tissue donations, predominantly from patients undergoing joint replacement surgery. The number of living tissue donations is 9% fewer than 2017 (4,248) and 2% higher than 2013 (3,805).

### Living tissue donations 2013, 2017 and 2018



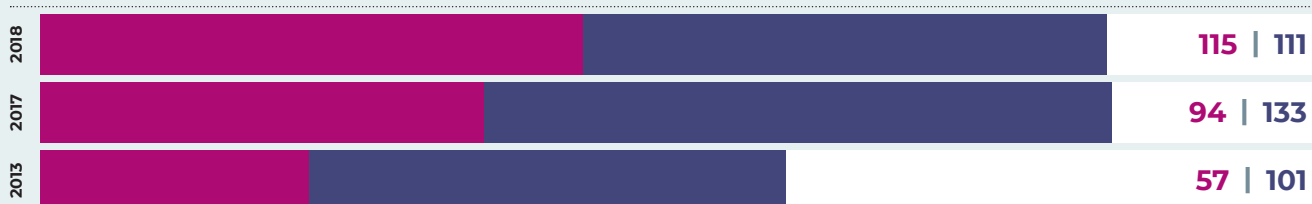
## Deceased tissue donations

The 337 deceased tissue donors in 2018 resulted in 464 tissue donations. This represents a 15% decrease in tissue donations compared with 2017 (547) and an 18% increase over 2013 (392). There were 226 musculoskeletal, 110 cardiovascular, 115 skin and 13 pancreas islets deceased tissue donations.

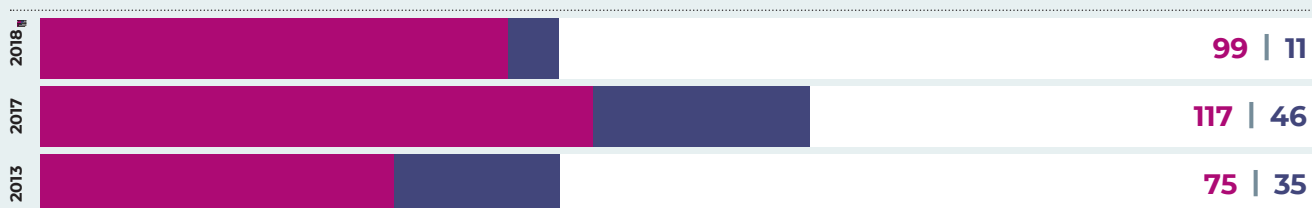
### Deceased tissue donations 2013, 2017 and 2018

● Organ/Tissue ● Tissue only

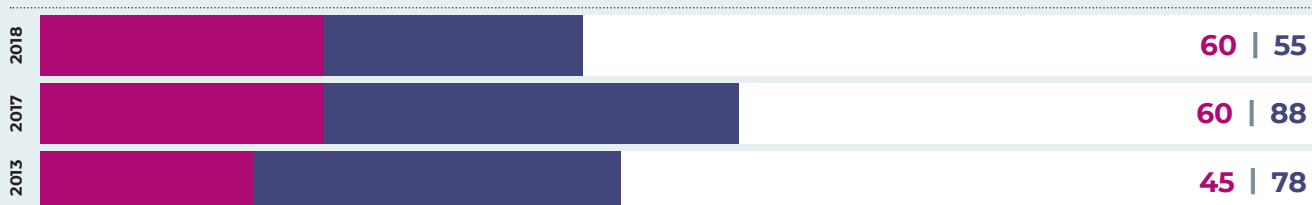
#### Musculoskeletal



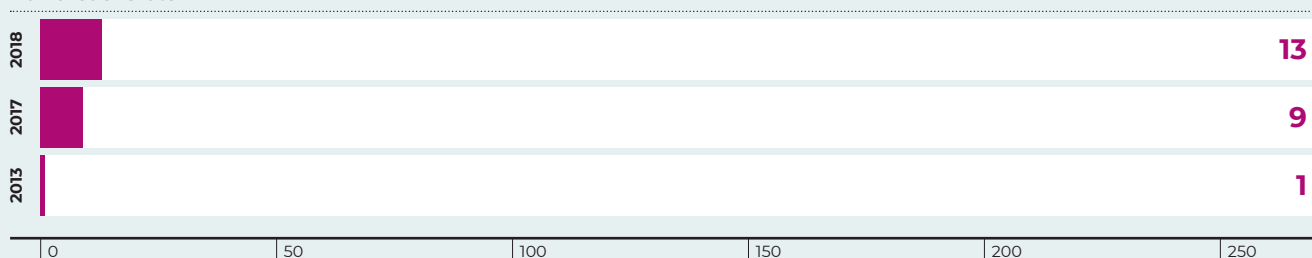
#### Cardiovascular



#### Skin



#### Pancreas Islets



## Notified tissue transplant recipients

In 2018 there were 8,258 notified tissue transplant recipients. This is a 10% increase over 2017 (7,470) and a 123% increase since 2013 (3,697). These included 7,940 recipients of musculoskeletal tissue, 234 recipients of cardiovascular tissue and 84 recipients of skin tissue.

In addition there were 13 recipients of pancreas islets tissue not included in the 2018 total above.

