

**1,713**

**LIVES TRANSFORMED BY**

**503**

**DECEASED ORGAN DONORS &**

**267**

**LIVING ORGAN DONORS IN 2016**

## **AUSTRALIAN DONATION AND TRANSPLANTATION ACTIVITY REPORT 2016**



# 2016 AUSTRALIAN DONATION AND TRANSPLANTATION ACTIVITY REPORT

## PART 1: ORGAN DONATION AND TRANSPLANTATION

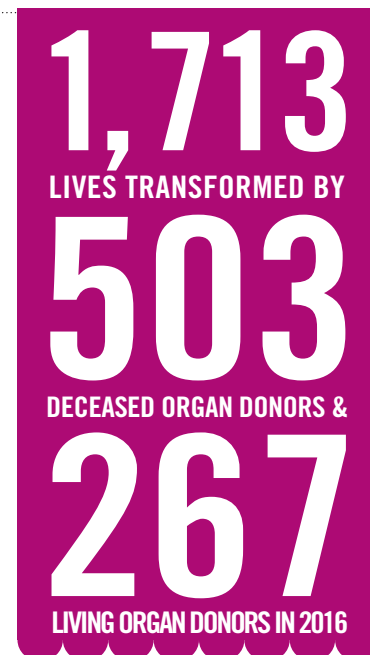


## Record outcomes from organ donation and transplantation

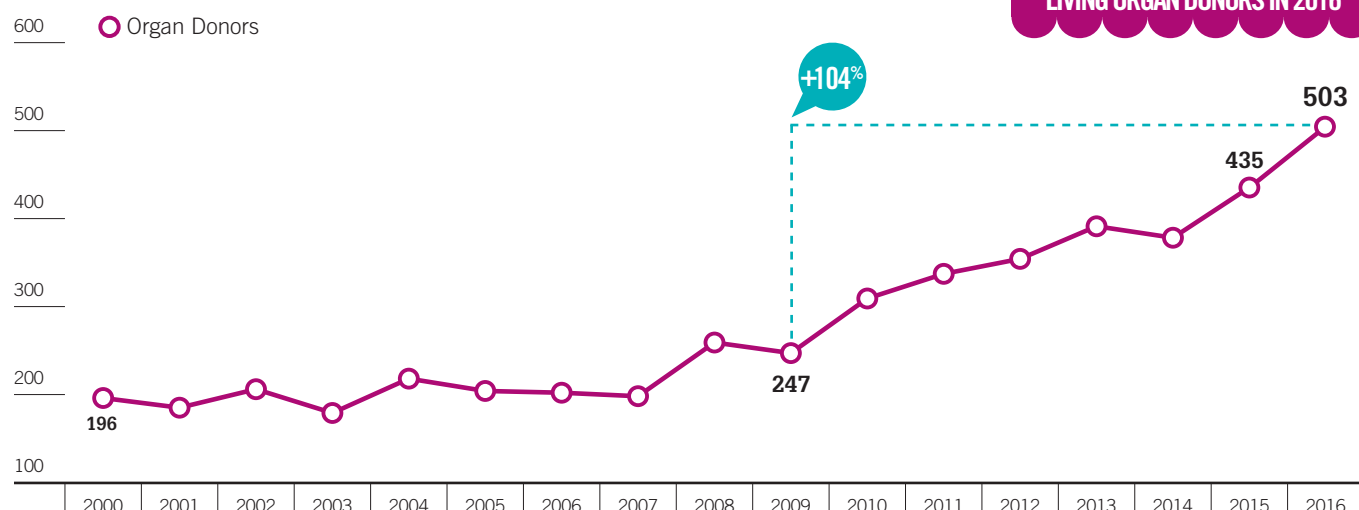
**In 2016 a record 1,713 lives were saved and transformed through the generosity of 503 deceased organ donors and their families and 267 living donors.**

Donation and transplantation outcomes have increased substantially since 2009 under Australia's national reform program.

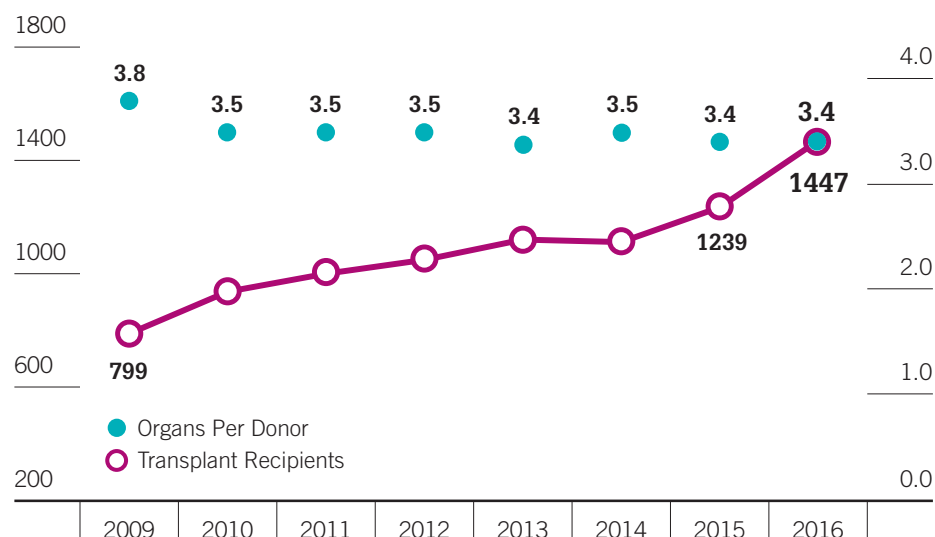
Deceased organ donation has more than doubled, with 503 donors in 2016 compared with 247 in 2009, with an 81% increase in the number of organ transplant recipients (1,447 in 2016 compared with 799 in 2009).



### Deceased organ donors 2000 – 2016



### Transplant recipients and organs transplanted per donor 2009 – 2016



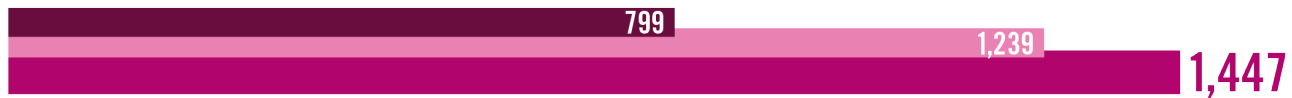
The number of organs retrieved and transplanted from each donor has decreased from 3.8 in 2009 to 3.4 organs per donor in 2016.

**The decrease in organs utilised per donor reflects positive change in practice in Australia with broader acceptance of organs from donors who may not have previously been considered, for example donors from an older population.**

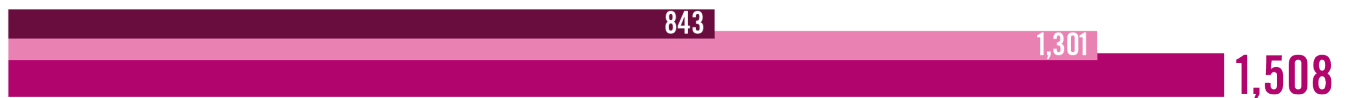
## Growth from 2009 and 2015 to 2016



104% increase in organ donors since 2009



81% increase in transplant recipients



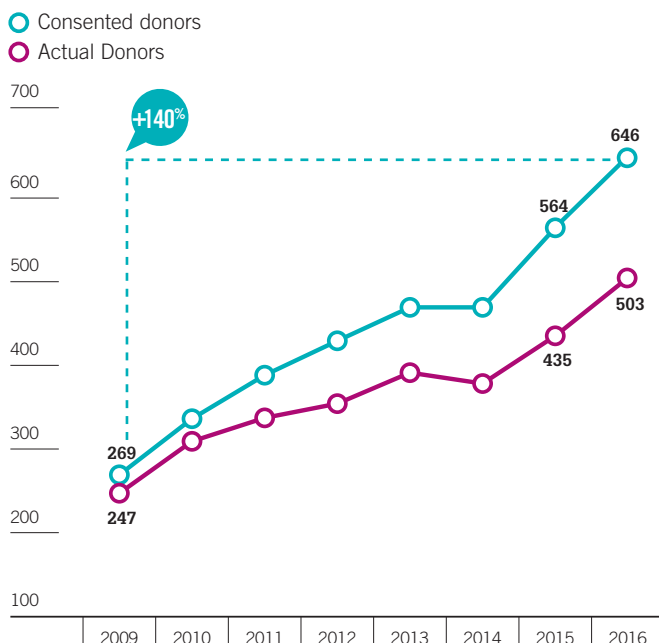
79% increase in transplant procedures

● 2009 ● 2015 ● 2016

## Growth in consented organ donors

In Australia, the family will always be asked to confirm the donation decision of the deceased before organ and tissue donation can proceed. However, in some cases where the family provides consent, organs are not suitable for transplantation and donation does not occur. These cases are referred to as intended donors. In a number of cases this does not preclude tissue donation.

### Consented (Actual & Intended) & Actual donors 2009-2016



The 2016 outcome of 646 consented organ donors represents a 140% increase over the 269 consented donors in 2009. This reflects the increased efforts of the donation sector to identify all potential donation opportunities, including increased donation after circulatory death.

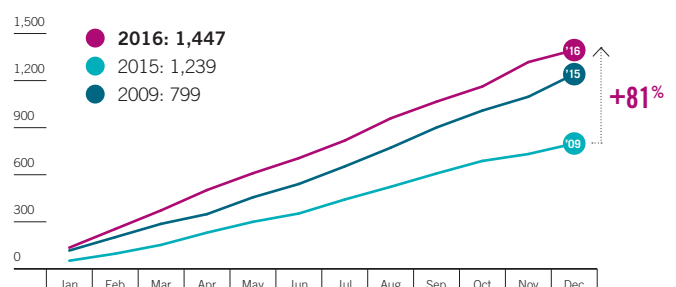
## Organ transplant recipients and deceased organ donors 2009, 2015 and 2016

In 2016 1,447 lives were saved and transformed through the generosity of 503 deceased organ donors and their families.

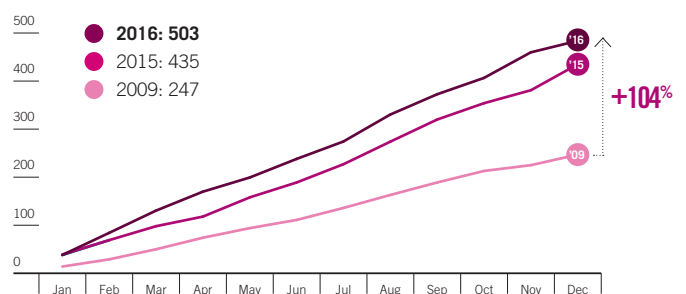
When compared with 2015 figures, Australia's 2016 outcomes represent:

- ▶ a 17% increase in the number of transplant recipients (1,447 recipients in 2016 compared with 1,239 in 2015)
- ▶ a 16% increase in the number of deceased organ donors (503 donors in 2016, compared with 435 donors in 2015).

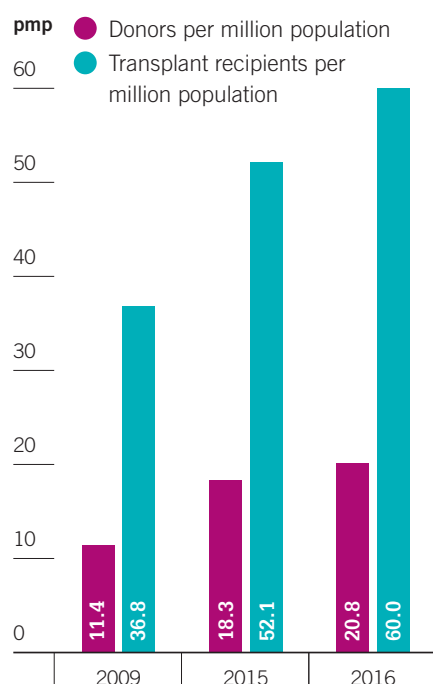
### Transplant Recipients 2009, 2015 & 2016



### Organ Donors 2009, 2015 & 2016

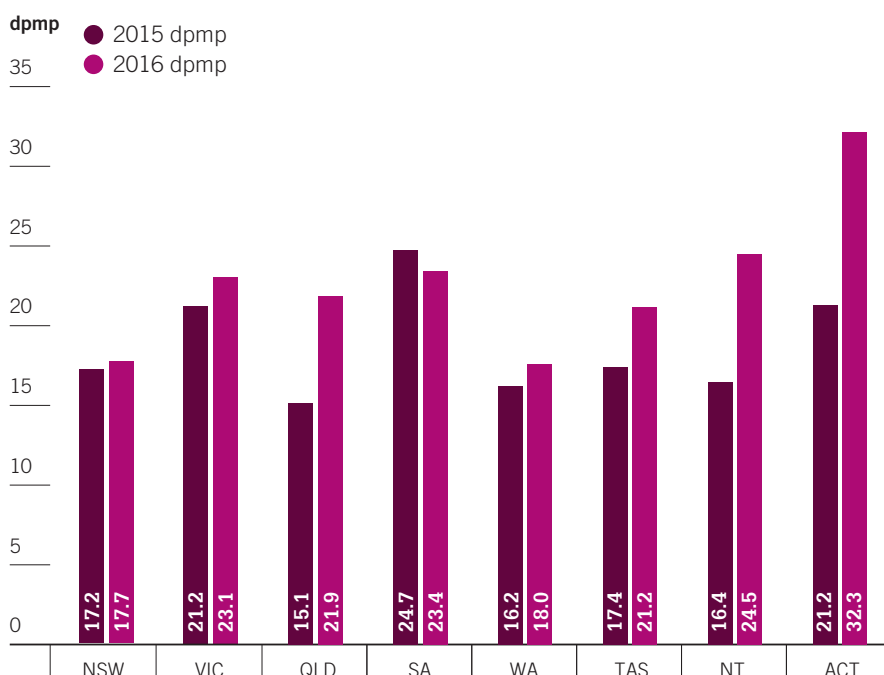


## Organ transplantation and donation rates 2009, 2015 & 2016



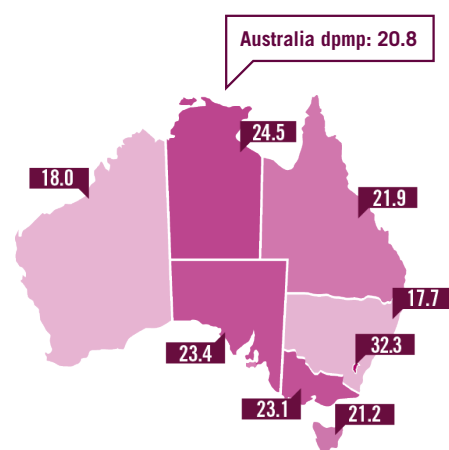
In 2016 the transplant recipients per million population rate (trpmp) was 60.0, 15% higher than the 2015 outcome (52.1 trpmp).

The donor per million population rate (dpmp) for 2016 was 20.8 dpmp, 14% higher than the 2015 outcome (18.3 dpmp)



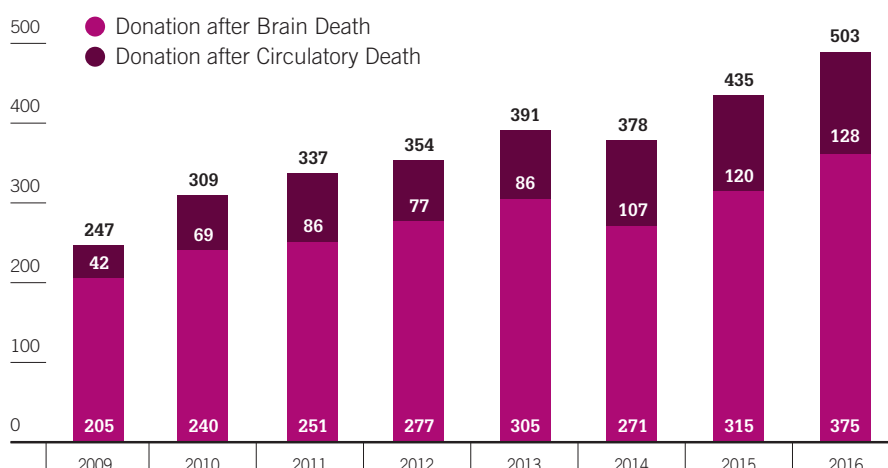
## Organ donation rates by jurisdiction 2015 and 2016

Jurisdictional outcomes in 2016 continued to demonstrate variation across states and territories, with annual donation rates ranging from 17.7 dpmp to 32.3 dpmp.



## Deceased organ donors by donation pathway 2009 to 2016

In 2016 the majority (75% or 375 donors) of deceased organ donors came from the Donation after Brain Death (DBD) pathway, with the remaining 25% (128) from the Donation after Circulatory Death (DCD) pathway. Compared with 2015, this represents a 19% increase in donations realised from the DBD pathway and a 7% increase in donations from the DCD pathway.

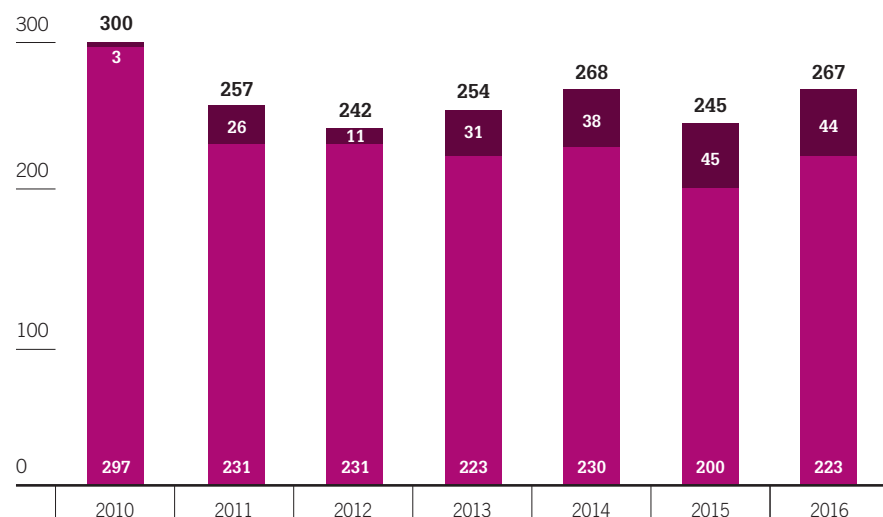


## Living Donors 2015 and 2016

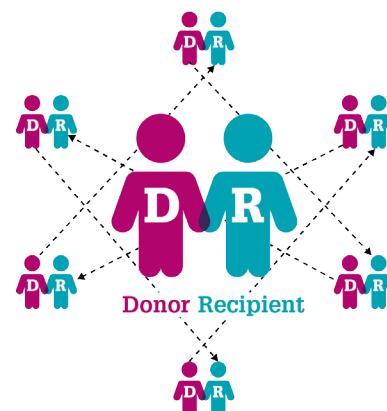
**In 2016 there were 265 living kidney and 2 living liver donors. This is an increase from the total of 245 living donors in 2015.**

The majority of kidneys and livers transplanted from living donors were from donors genetically or emotionally related to the recipient, however there were also 44 donors through the Australian Paired Kidney Exchange program (AKX).

- Living donors (minus AKX)
- AKX donors



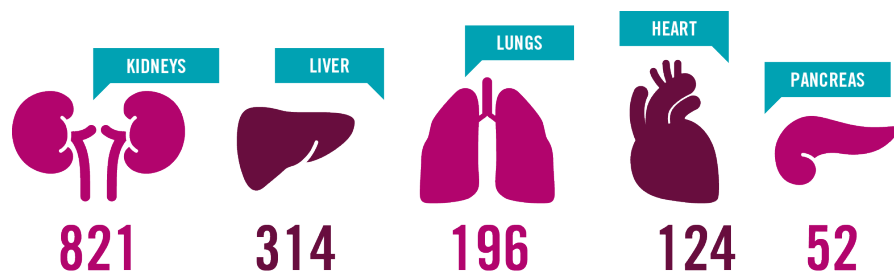
## THE AKX



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 an incompatible blood type or tissue type.

**The AKX program has resulted in 198 successful live kidney transplants since its establishment in 2010.**

## Organ transplant recipients



**Kidneys are the predominant organ donated and transplanted. In 2016, 821 lives were transformed by kidneys transplanted from deceased organ donors.**

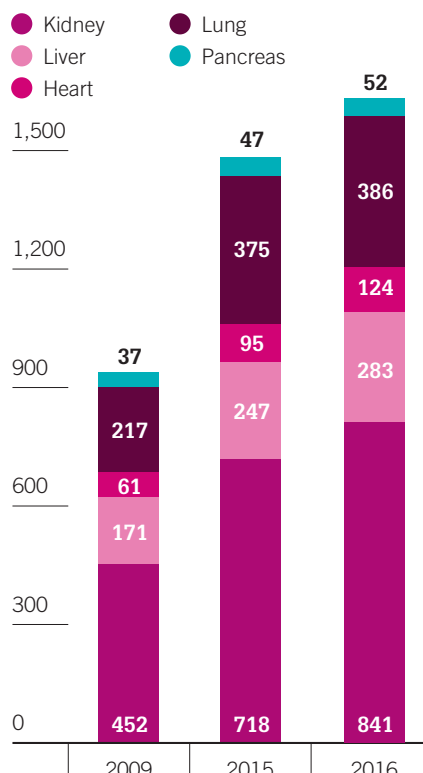
In addition:

- ▶ 314 lives were saved through liver transplants
- ▶ 196 lives were saved through lung transplants
- ▶ 124 lives were saved through heart transplants
- ▶ 52 lives were saved through pancreas transplants.

There was also one intestine transplant in 2016.

## Organs transplanted from deceased donors

In 2016 there were 1,687 organs transplanted from deceased donors, a 14% increase over 2015 (1,481).



## Knowledge of donation decisions makes a difference

In Australia, families of potential deceased donors are asked to confirm their loved one's donation decision, including where a patient has previously registered a donation decision directly either on the Australian Organ Donor Register or through drivers licence issue or renewal. Registration and family knowledge of a potential donor's wishes are key drivers of consent for donation.

### Consent Rates



When donor has registered to donate



When families know donor's decision



When donor has not registered and family does not know donor decision



National average

Where potential donors have previously registered a donation decision and/or the family has prior knowledge of their decision, in most cases this is upheld by the family. In nine out of ten cases, families agree to donation proceeding when the deceased was a registered donor.

Where the family has prior knowledge of a patient's wishes relating to donation, consent occurs in 75% of cases compared to an overall consent rate of 60%.

## Consent Rates by Ethnicity and Culture

The ethnic and or cultural background of a potential donor and their family impacts the likelihood of consent for donation.

Consent rates for particular ethnic and cultural groups vary significantly<sup>1</sup>.

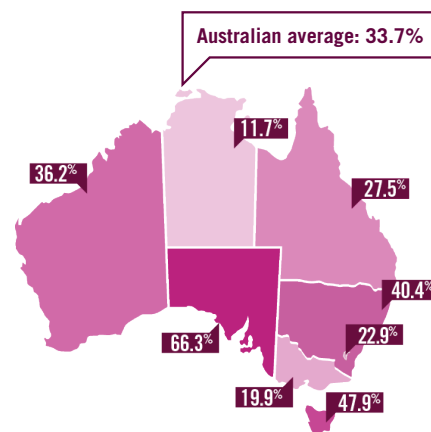
GENERAL ETHNIC GROUP	POTENTIAL DONORS	CONSENTED DONORS	CONSENT RATE
North-West European - British	30	25	83%
Southern and Central Asian - Indian	15	11	73%
Oceanian - Australian	698	481	69%
Southern and Eastern European Italian	10	5	50%
Oceanian - New Zealander	11	5	45%
Oceanian - Maori	12	5	42%
Oceanian - Australian Aboriginal	47	19	40%
South-East Asian - Vietnamese	17	6	35%
Southern and Eastern European - Greek	11	3	27%
South-East Asian - Filipino	16	4	25%
North - East Asian - Chinese	25	3	12%

<sup>1</sup> Ethnic and/or cultural groups with less than 10 potential donors have been excluded.

## Organ Donation Registration 2016

Registration rates vary significantly across states and territories.

The highest registration rate is in South Australia where donation decisions are captured both directly to the Australian Organ Donor Register and through drivers licence issue and renewal.

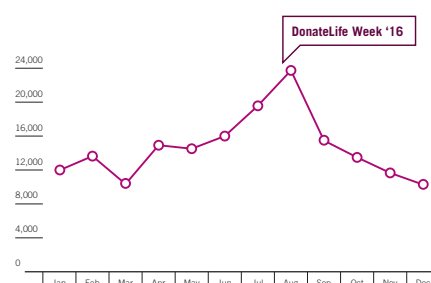


## DonateLife Week

The DonateLife Week campaign ran from 1 July to 31 August. During this time more than 40,000 Australians joined the Australian Organ Donor Register (AODR).

This represented an increase of 68% on the same period in 2015.

### Monthly AODR Registrations 2016



## Australia's potential deceased organ donor population 2016

Not everyone can be a deceased organ donor as particular circumstances must prevail in order for a patient to be medically suitable for donation. Deceased organ donation is only possible from a subset of end of life events that occur in intensive care units or hospital emergency departments. Potential deceased donors need to be recognised as such, and if medically suitable, the family will be asked to confirm the donation decision of their family member before donation can occur.

By way of example, in 2016 the Australian population<sup>1</sup> was 24,127,159 with an estimated 159,052 deaths occurring<sup>2</sup>. Of these, approximately 76,577 deaths occurred in hospitals<sup>3</sup> with around 1,177 potential donors identified<sup>4</sup>.

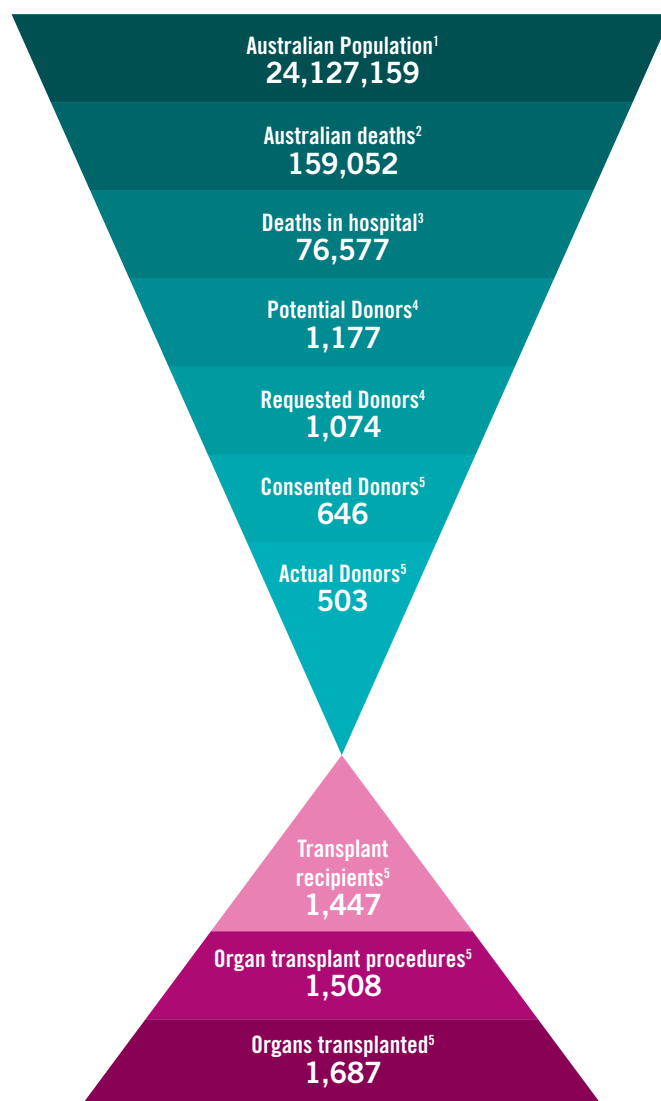
Requests to families for donation were made in around 1,074 cases<sup>4</sup>, with 646 families consenting to donation<sup>5</sup>. In 143 cases<sup>5</sup> where family consent was given, donation did not proceed for a variety of clinical reasons.

The resulting 503 deceased organ donors<sup>5</sup> enabled 1,508 organ transplant procedures<sup>5</sup> where 1,687 organs were transplanted<sup>5</sup>.

As a result, the lives of 1,447 transplant recipients<sup>5</sup> and their families were transformed.

### Source:

- <sup>1</sup> Estimated Resident Population 30 June 2016, ABS 3101.0 Australian Demographic Statistics, (released 15 December 2016)
- <sup>2</sup> ABS 3302.0 Deaths, Australia, 2015 (released 28 September 2016)
- <sup>3</sup> AIHW Australian Hospital Statistics 2014 -15 (released 16 March 2016)
- <sup>4</sup> Estimated using DonateLife Audit Data (January 2017)
- <sup>5</sup> Deceased Organ Donation in Australia, ANZOD, February 2017.



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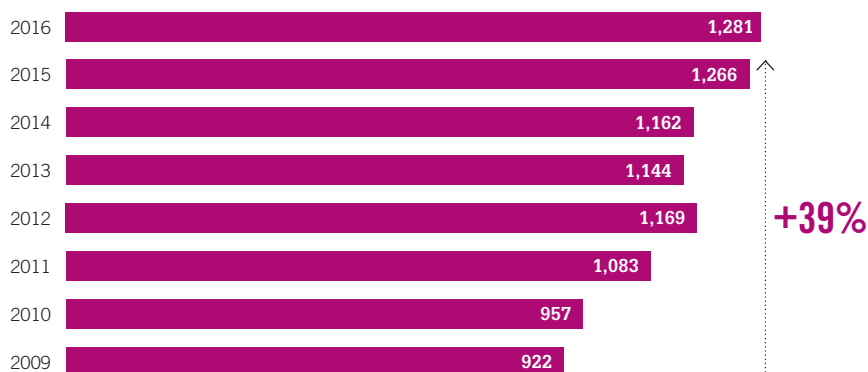
## PART 2: EYE AND TISSUE DONATION



### Eye donors 2009-2016

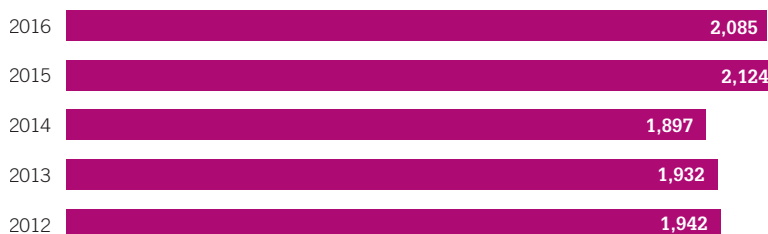
In 2016 there were 1,281 eye donors, representing a 1% increase in eye donors compared with the 2015 outcome (1,266).

This outcome represents a 39% increase in eye donors over the 2009 baseline (922 donors).

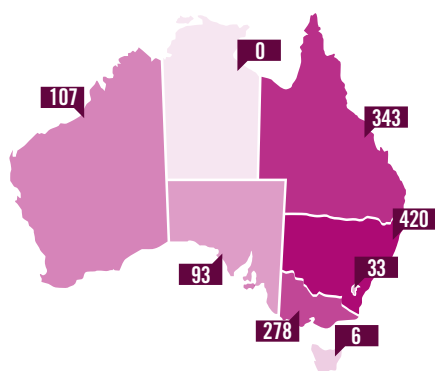


### Corneal transplants 2012-2016

In 2016 there were 2,085 corneal transplants. Australian eye banks continued to meet all requests for eye tissue for transplantation in 2016 with transplant rates remaining relatively consistent since 2012.



### Eye donors by state 2016

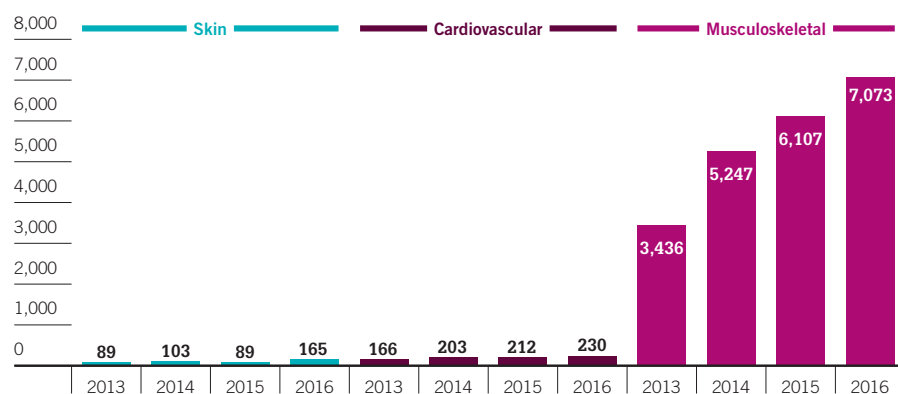


### Tissue transplants 2013-2016

In 2016, there were 7,468 notified tissue transplant recipients, an increase of 17% on 2015 (6,421). These included 7,073 recipients of musculoskeletal tissue, 230 recipients of cardiovascular tissue and 165 recipients of skin tissue.

Donated bone and tendons can be grafted to replace bone and ligaments that have been lost as a result of tumors, disease such as debilitating arthritis or traumatic injury. Tissue donation can save a limb of a person who has developed cancer and would otherwise face limb amputation. It can also aid fracture healing, strengthen hip and knee joint replacements, replace and repair spinal deformities.

Cardiovascular tissue donations in the form of heart valves are often used to repair congenital defects in young children and babies and to replace diseased valves in adults.



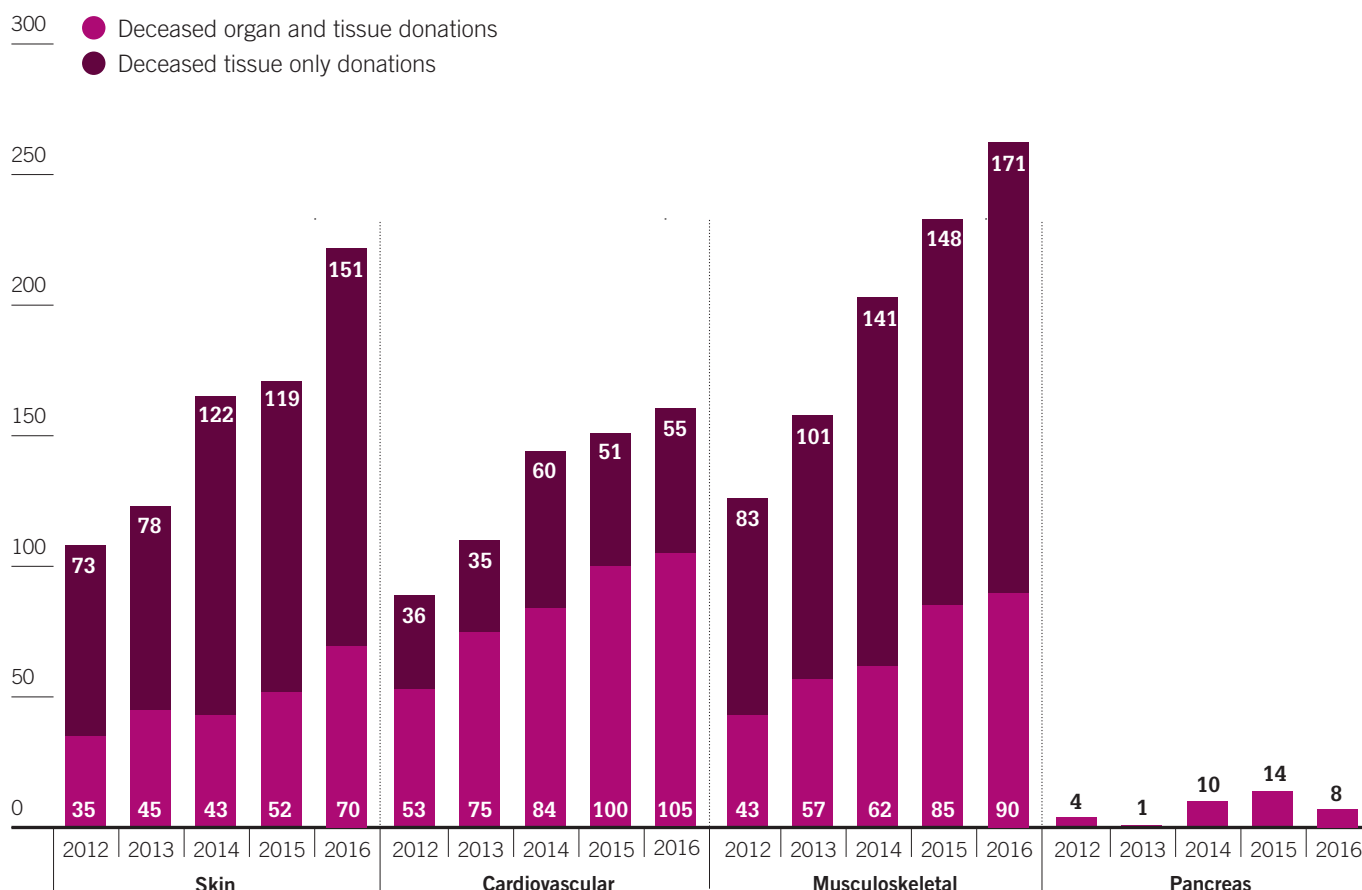
## Deceased tissue donation 2012–2016

The provisional 2016 outcome of 4,291 tissue donors includes 3,867 (90%) living tissue donors and 424 (10%) deceased tissue donors.

The 424 deceased donors resulted in 650 tissue donations. This represents a 14% increase over 2015 (562), and almost

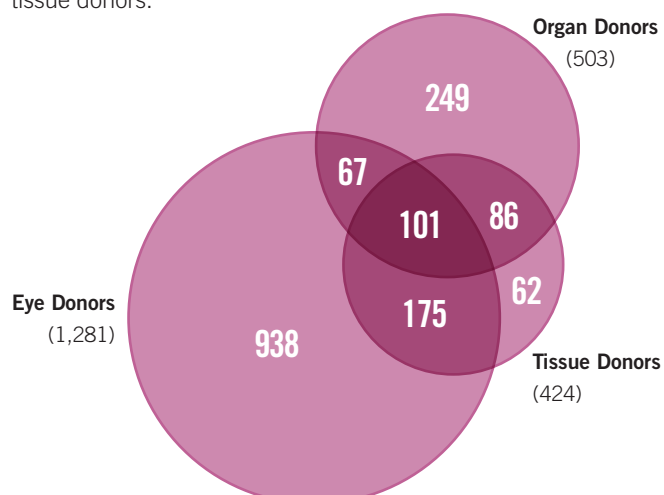
double the number of tissue donations from deceased donors in 2012 (327), the first year in which national tissue donation outcomes were reported for Australia.

There were 261 musculoskeletal, 221 skin, 160 cardiovascular and 8 pancreas tissue donations.



## Deceased Donors

More than half of deceased organ donors are also eye and/or tissue donors.



## Living tissue donation 2012–2016

There were **3,923 living tissue donations** in 2016 from 3,867 donors, predominantly patients undergoing joint replacement surgery.



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For more information visit  
[donatelife.gov.au](http://donatelife.gov.au)

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