

# Performance Report 2014



Australian Government  
Organ and Tissue Authority

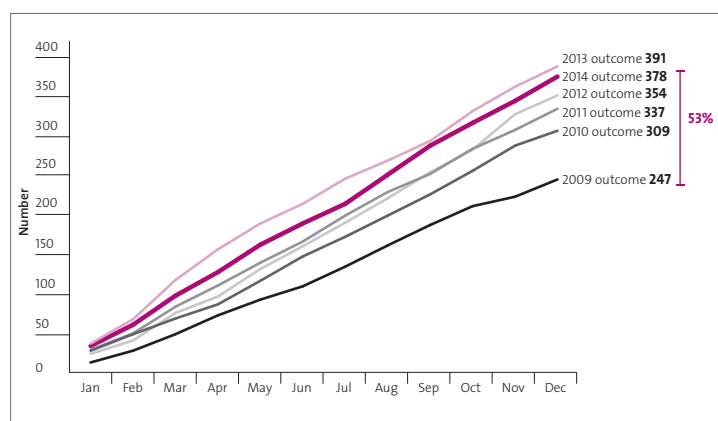
## Deceased organ donors 2009 – 2014

In 2014 more organs were transplanted from fewer donors.

There were 378 deceased organ donors in 2014. This outcome was 3% lower than that achieved in 2013 (391 deceased organ donors). In contrast, the number of organs transplanted was 1% higher than the 2013 outcome.

This result reflects a higher organs per donor ratio. The 2014 organs per donor ratio of 3.2 was higher than the 2013 outcome of 3.0, indicating that donations principally proceeded from standard criteria donors, and did not draw upon more extended criteria donors.

The 2014 organ donor outcome represents a 53% increase over 2009 (247), the year the DonatLife Network was established. When compared with the historical average of 205 organ donors per annum (2000-2008) this represents an 84% increase in the number of organ donors in 2014.

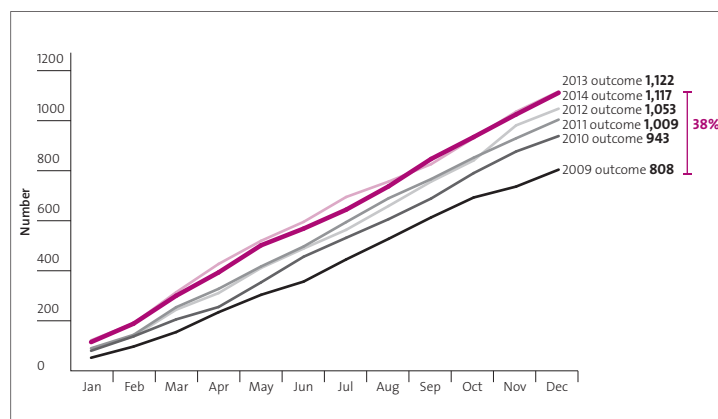


## Organ transplant recipients 2009 – 2014

In 2014 there were 1,117 transplant recipients. This result is comparable to the outcome achieved in 2013 (1,122 transplant recipients).

The 2014 outcome represents a 38% increase over 2009 (808), the year the DonatLife Network was established. When compared to the historical average of 685 organ transplant recipients per annum (2000-2008) this represents a 63% increase in the number of transplant recipients in 2014.

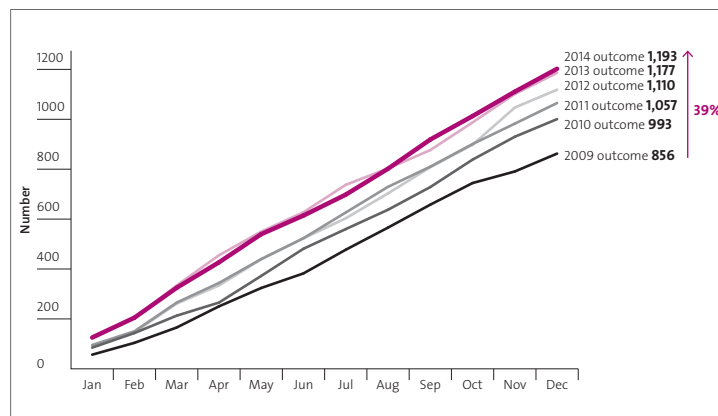
One in four of the 1,117 organ transplant recipients received a transplant because of the growth in donation outcomes since 2009.



## Organs transplanted 2009 – 2014

In 2014 1,193 organs were transplanted. This outcome was 1% higher than that achieved in 2013 (1,177 organs transplanted).

The 2014 outcome represents a 39% increase over 2009 (856), the year the DonatLife Network was established. When compared to the historical average of 720 organs transplanted per annum (2000-2008) this represents a 66% increase in the number of organs transplanted in 2014.

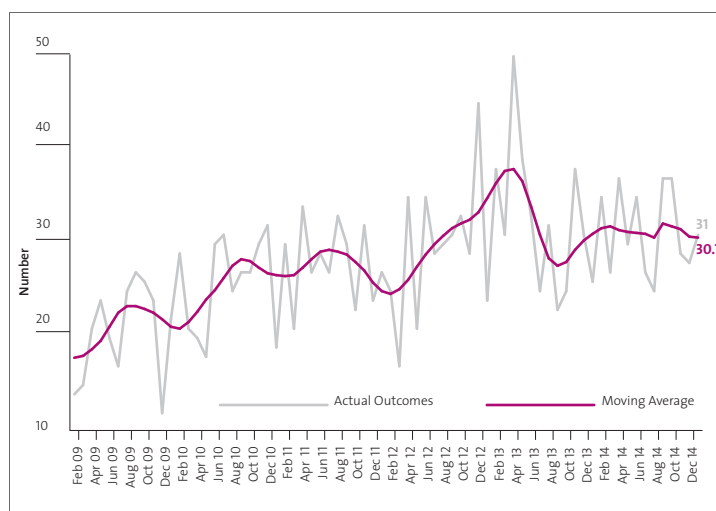


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The following trends are calculated by taking a Henderson moving average of the actual outcomes to smooth out the month to month volatility. They are designed to indicate the broad direction of a series rather than specific month to month outcomes.

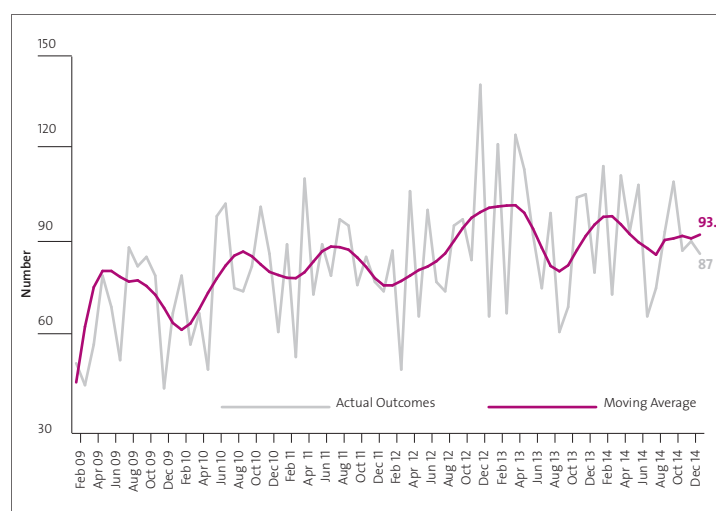
## Deceased organ donors monthly actual and trend 2009-2014

The deceased organ donation trend has increased over time from less than 20 donors a month in January 2009 to 31 donors a month by December 2014.



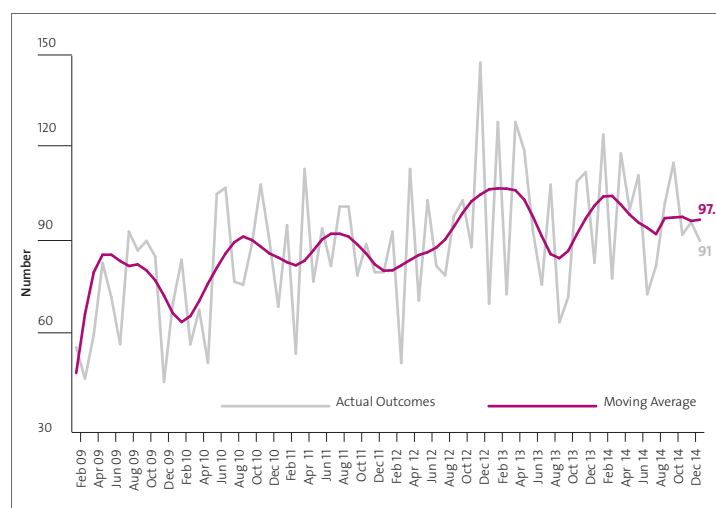
## Transplant recipients monthly actual and trend 2009-2014

The transplant recipients trend has increased over time from less than 50 transplant recipients a month in January 2009 to 93 transplant recipients a month by December 2014.

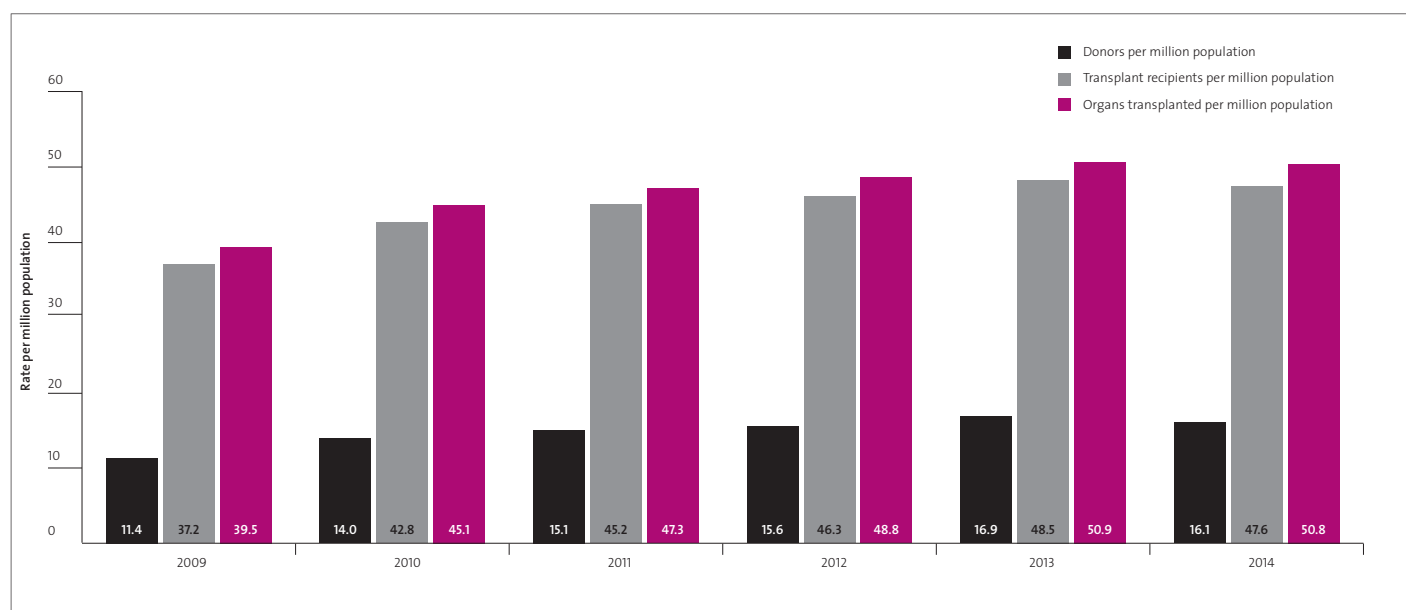


## Organs transplanted monthly actual and trend 2009-2014

The organs transplanted trend has increased over time from less than 50 organs transplanted a month in January 2009 to 98 organs transplanted a month by December 2014.



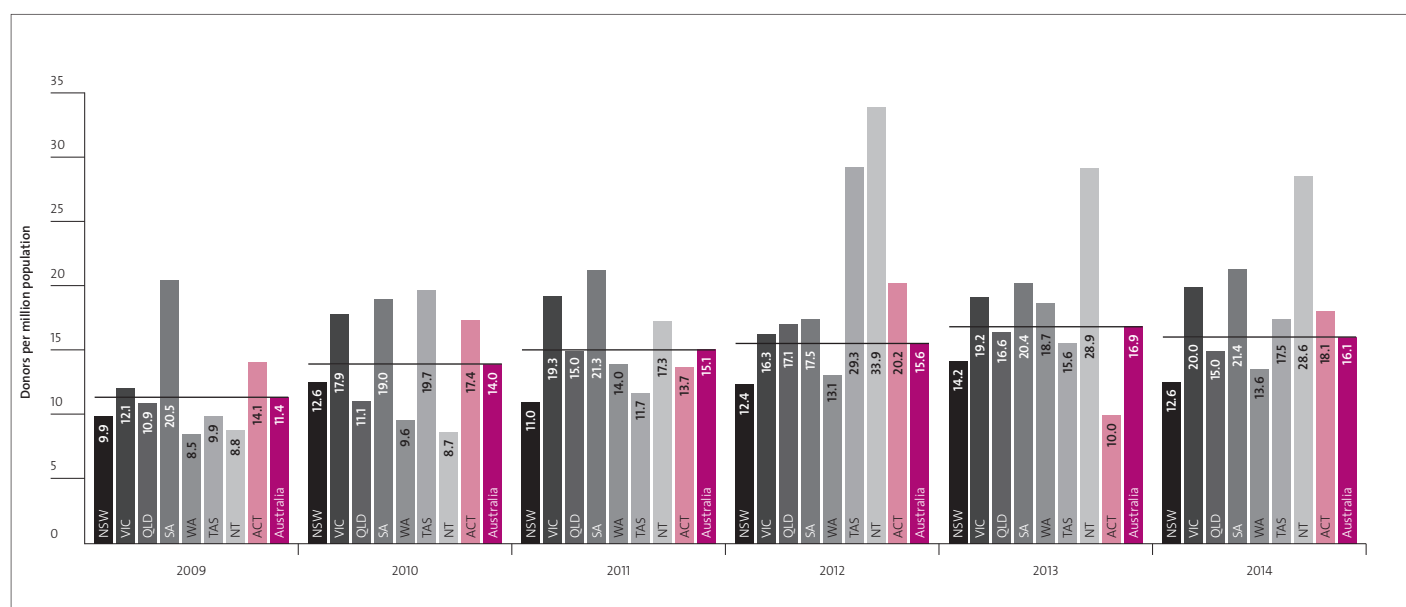
## National deceased donation and transplant rates 2009–2014



In 2014 Australia had a donors per million population rate (dmpm) of 16.1 dmpm. This result represents a 4.7% decrease (0.8 dmpm) compared with the 2013 outcome of 16.9 dmpm and a 41% increase over 2009 (11.4 dmpm), the year the DonatLife Network was established.

Using the international standard measure of organs transplanted per million population (otpm), Australia achieved an outcome of 50.8 otpm in 2014 which is comparable to the 2013 outcome (50.9 otpm) and 29% higher than in 2009 (39.5 otpm), the year the DonatLife Network was established.

## Jurisdictional donation rates 2009 – 2014



In 2014, there was significant variation in jurisdictional outcomes with donation rates ranging from 28.6 dmpm to 12.6. Victoria, South Australia, Tasmania and the Australian Capital Territory jointly accounted for a 3% increase in the national dmpm. New South Wales, Queensland and Western Australia, however, together accounted for a 7.7% decline. The jurisdictional variation in outcomes resulted in a net decrease of 4.7% in the national dmpm (0.8 dmpm). Though well above the national outcome, the slight decrease in dmpm in the Northern Territory had a negligible impact on the national outcome due to the small number of deceased donors and relatively small population size.

The potential for continued national growth in donation outcomes is evident in the 2014 outcomes where five of the eight jurisdictions had donation rates of 17.5 dmpm and higher.

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## Organs transplanted from deceased donors 2009–2014

Kidneys are the predominant organ donated and transplanted. In 2014, 659 kidneys were transplanted from deceased organ donors. This was 2% higher than the outcome in 2013 (645), and 46% higher than in 2009 (452), the year the DonatLife Network was established.

In 2014 there were also four combined heart/lung transplants and one intestinal transplant. These transplants have not been represented graphically due to the relatively small numbers when compared with other types of organ transplants.

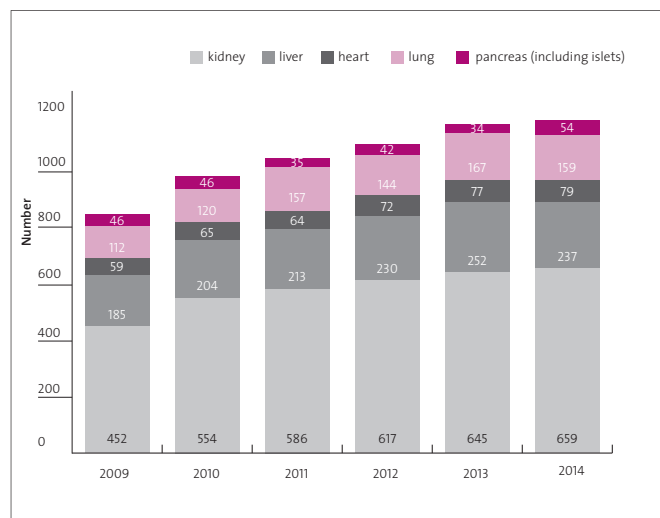
The 2014 heart transplant counts include two hearts transplanted successfully from donors who donated after circulatory death. Prior to this, heart transplant units relied on donor hearts from brain-dead donors. This world first procedure has the potential to increase the number of available hearts for transplantation and consequently the number of heart transplant recipients in the future.

In 2014:

79 hearts were transplanted, 3% higher than the outcome in 2013 (77) and 34% higher than in 2009 (59).

159 lungs were transplanted, 5% lower than the outcome in 2013 (167) and 42% higher than in 2009 (112).

237 livers were transplanted, 6% lower than the outcome in 2013 (252) and 28% higher than in 2009 (185).

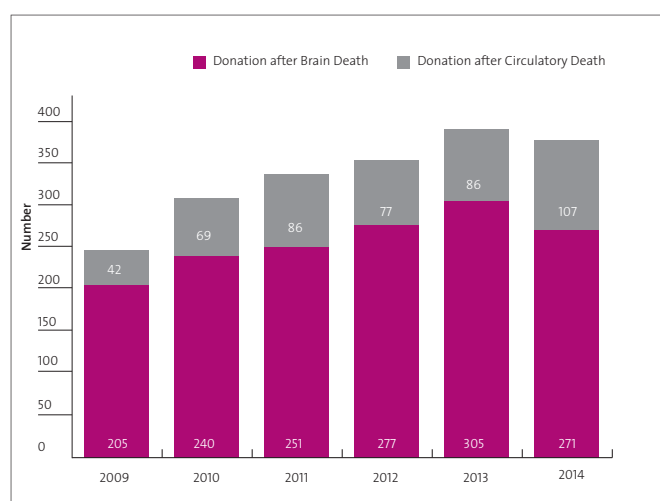


## Deceased donors by donation pathway 2009–2014

In 2014 72% (271) of deceased donors were realised from the Donation after Brain Death (DBD)\* pathway, with the remaining 28% (107) from the Donation after Circulatory Death (DCD)\*\* pathway.

In 2014 there was an 11% decrease in donations realised from the DBD pathway and a 24% increase in donations from the DCD pathway when compared to the 2013 outcomes.

Of the 131 additional donors in 2014 when compared to the 2009 outcome, 66 donors (50% of the growth) were realised from the DBD pathway and 65 donors (50% of the growth) were realised from the DCD pathway.



\* DBD – Brain death occurs when a person's brain is so damaged that it will never function again. When doctors determine that a person in intensive care has died in this way, donation after brain death can be considered.

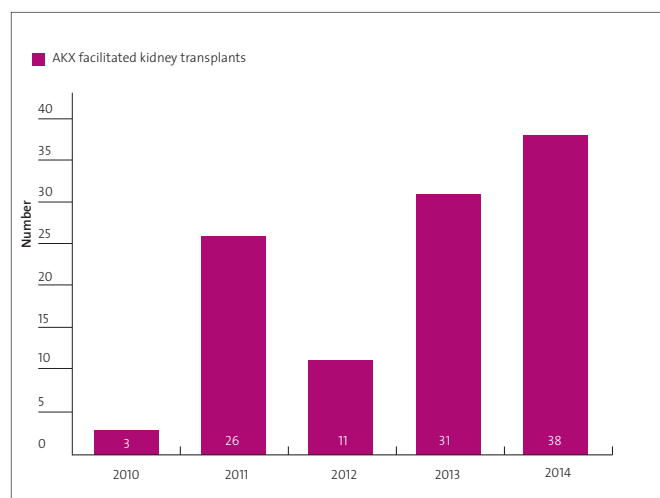
\*\* DCD – Circulatory death occurs when a person's heart stops beating. When doctors determine that a person in intensive care will not recover and their heart will stop beating within 90min of removal of artificial support, donation after circulatory death can be considered.

## Australian Paired Kidney Exchange (AKX) programme

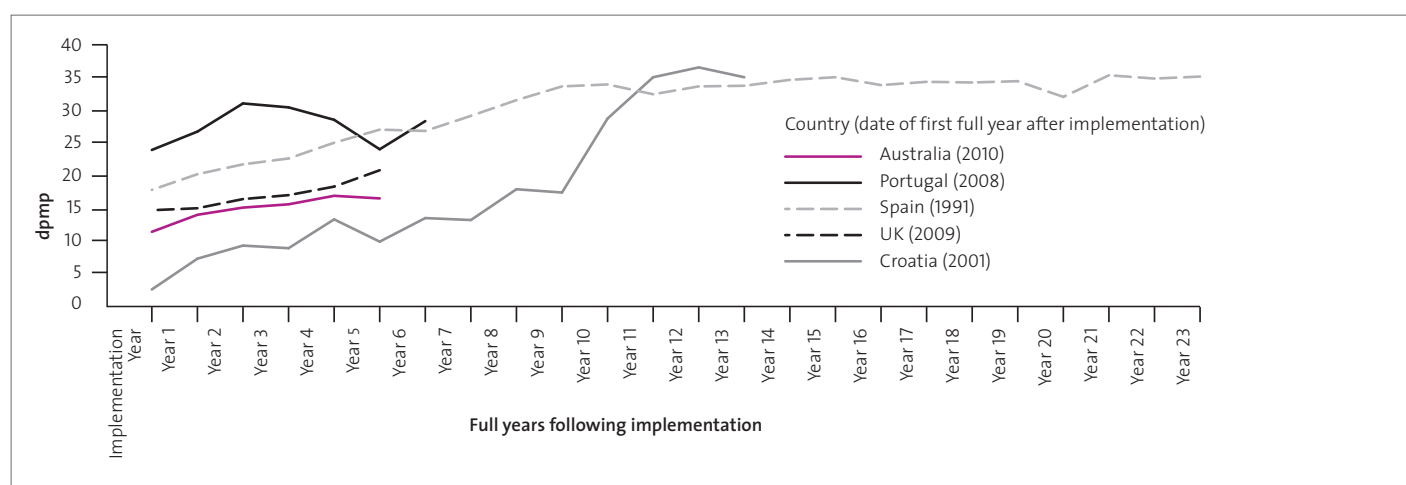
In 2014 the Australian Paired Kidney Exchange (AKX) programme continued to meet its aim to increase the number of live donor kidney transplants performed in Australia by identifying matches for patients eligible for a kidney transplant who have a living donor willing but unable to donate because of an incompatible blood type or tissue type.

In 2014 the AKX programme facilitated 38 live donor kidney transplants, bringing the total number of transplants conducted under the programme to 109 since commencement in August 2010. The number of AKX-facilitated kidney transplants in 2014 (38) was more than 50% of the total number of AKX transplants facilitated between 2010 and 2013 (71). Due to the high-sensitivity of patients enrolled, these surgeries were unlikely to have occurred in the absence of the AKX programme.

There are currently 21 transplant centres across Australia participating in the AKX programme (7 in New South Wales, 7 in Victoria, 2 in Queensland, 2 in South Australia and 3 in Western Australia).



## International comparison



It is difficult to draw direct comparisons between countries in terms of their progress in organ donation reform, as there are many differences between health care systems, population size, community attitudes and the relative starting points for national organ and tissue donation reform.

The key lesson to learn from countries with high donation outcomes is that reform of organ and tissue donation is an incremental process that takes time as national systems are developed and hospital based clinical practice is reformed.

International experience from leading organ donation countries has shown that variation in donation and transplantation outcomes has occurred annually while rates continue to trend upwards over time. This is apparent in Portugal and Croatia where performance declined in their fifth year of organ and tissue donation reform. The key elements of international reform models that have been adopted by Australia are:

- 1 An appropriate legal and ethical framework
- 2 A national coordinating body
- 3 Hospital-based clinical donation specialists
- 4 Specialist training for clinical staff in management of the deceased donation process and family donation conversations
- 5 Implementation of a clinical governance framework that supports quality assurance and audit of hospital clinical practice and governance of the donation process
- 6 Financial support to donor hospitals to ensure that costs related to donor management are not a barrier to donation
- 7 Media engagement and national community awareness and education, and
- 8 International cooperation to share best practice.

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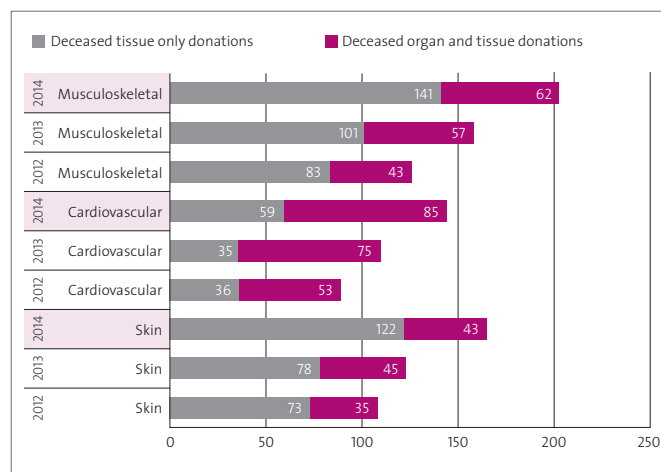
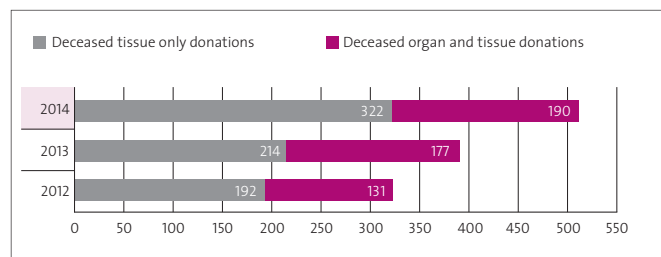
## Deceased tissue donation 2012 – 2014

The provisional 2014 outcome of 3,980 tissue donors included 331 (8%) deceased tissue donors and 3,649 (92%) living tissue donors.

The 331 deceased tissue donors gave 512 tissue donations in 2014 comprising 190 from solid organ and tissue donors and 322 from tissue only donors.

The 2014 outcome (512 tissue donations) represents a 31% increase over 2013 (391), and a 59% increase over 2012 (323), the first year in which national tissue donation outcomes were reported for Australia.

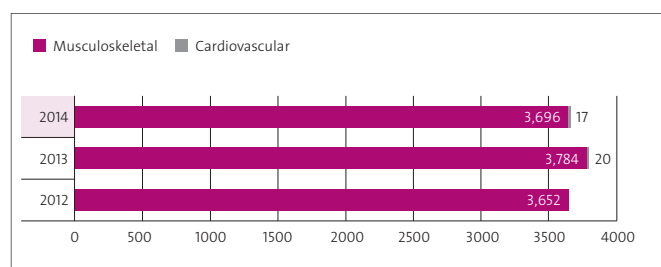
There was an increase in the number of musculoskeletal (203), skin (165) and cardiovascular (144) tissue donations in 2014. This compares to 158 musculoskeletal, 123 skin and 110 cardiovascular tissue donations in 2013.



## Living tissue donation 2012 – 2014

The 3,649 living tissue donors in 2014 gave 3,713 tissue donations, predominantly from patients undergoing joint replacement surgery.

This outcome represents a 2% decrease compared to 2013 (3,804), and a 2% increase compared to 2012 (3,652), the first year in which national tissue donation outcomes were reported for Australia.



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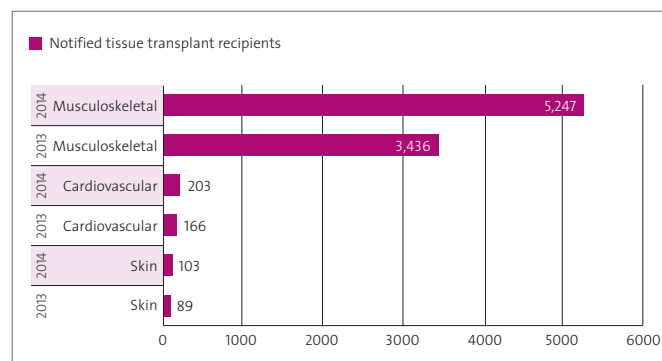
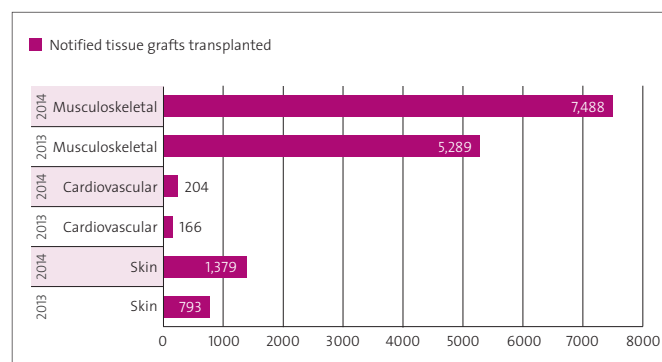
## Tissue transplant outcomes 2013 – 2014

In 2014 there were 9,071 notified tissue grafts transplanted. Of these, 7,488 were musculoskeletal tissue, 204 were cardiovascular tissue and 1,379 were skin tissue transplants<sup>1</sup>.

This outcome represents a 45% increase compared to the 2013 outcome of 6,248 notified tissue grafts transplanted.

In the same period, there were 5,553 notified tissue transplant recipients<sup>2</sup>, some recipients receiving multiple grafts. These included 5,247 recipients of musculoskeletal tissue, 203 recipients of cardiovascular tissue and 103 recipients of skin tissue.

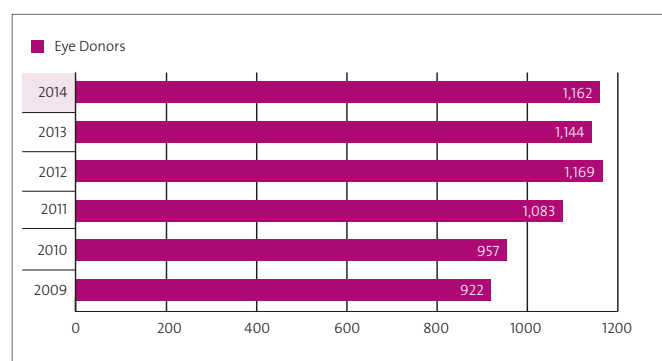
This outcome represents a 50% increase compared to the 2013 outcome of 3,691 notified tissue transplant recipients.



## Eye donors 2009 – 2014

The 2014 outcome was 1,162 eye donors, representing a 2% increase in eye donors compared with the 2013 outcome of 1,144 eye donors.

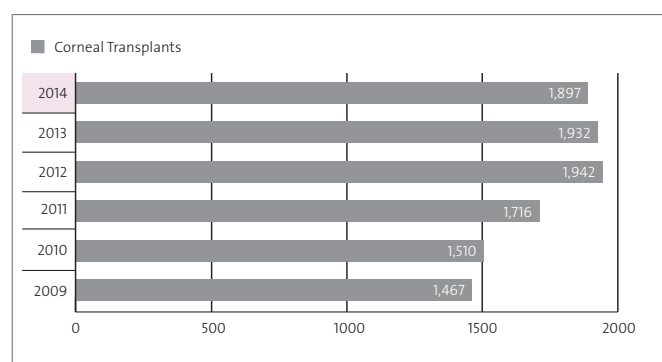
This outcome represents a 26% increase in eye donors over 2009 (922 donors).



## Corneal transplants 2009 – 2014

The 2014 outcome of 1,897 corneal transplants represents a 2% decrease compared with the 2013 outcome of 1,932 corneal transplants. Australian eye banks reported that all requests for eye tissue for transplantation were met in 2014.

This outcome represents a 29% increase over the 2009 outcome of 1,467 corneal transplants.



## Data sources

National data: Australia and New Zealand Organ Donation (ANZOD) Registry (January 2015)  
Australian Paired Kidney Exchange (AKX) Programme (January 2015)

International data: International Registry in Organ Donation and Transplantation (January 2015)

- 1 While the majority of tissue transplanted in Australia comes from Australian donors, tissue is imported in certain circumstances utilising the Therapeutic Goods Administration's special access scheme.
- 2 For the purpose of national reporting a tissue transplant recipient is counted as a transplantation event.

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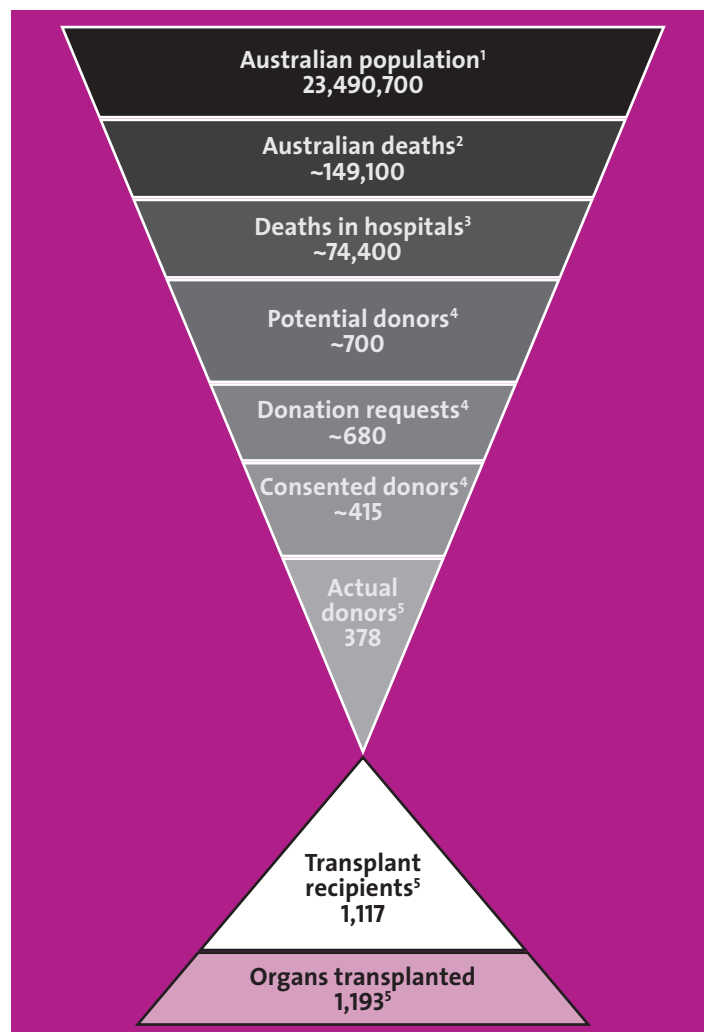
## Australia's potential deceased organ donor population 2014

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 identified and, if medically suitable, the family asked to confirm the wishes of their family member before donation can occur.

By way of example, in 2014 the Australian population<sup>1</sup> was 23,490,700 with an estimated 149,100 deaths occurring<sup>2</sup>. Of these, approximately 74,400 deaths occurred in hospitals<sup>3</sup> with around 700 potential donors identified<sup>4</sup> – around 1% of the hospital deaths.

Requests to families for donation<sup>4</sup> were made in around 680 cases, with approximately 415 families consenting to donation<sup>4</sup>. In just under 40 cases where family consent was given, donation did not proceed for a variety of reasons.

The resulting 378 deceased organ donors<sup>5</sup> enabled 1,193 organs to be transplanted<sup>5</sup>, transforming the lives of 1,117 transplant recipients<sup>5</sup>.



### Source:

1. 30 June 2014 estimated resident population (ABS 3101.0 Australian Demographic Statistics, Jun 2012. Released 18/12/2014)
2. Estimated from ABS 3302.0 Deaths, Australia, 2013. Released 6/11/2014.
3. Estimated from AIHW Australian hospital statistics 2012-13. Released 30/4/2014.
4. Extrapolated from September 2014 DonateLife Audit Report, Organ and Tissue Authority.
5. ANZOD Monthly Report on Deceased Organ Donation in Australia, January 2015.

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

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An Australian Government Initiative