In 2013 the national organ donation outcome was 10% higher than 2012 (391 organ donors compared to 354 in 2012). 391 organ donors transformed the lives of 1,122 Australians. The 2013 outcome represents a 58% increase over 2009 (247), the year the DonateLife Network was established.

When compared to the historical average of 200 organ donors per annum (2000–2008) this represents a 91% increase in the number of organ donors in 2013.

In 2013 the national organ transplant recipient outcome was 7% higher than 2012 (1,122 transplant recipients compared to 1,053 transplant recipients in 2012). The 2013 outcome represents a 39% increase over 2009 (808), the year the DonateLife Network was established.

One in four of the 1,122 transplant recipients have received a transplant because of the growth in donation outcomes since 2009. When compared to the historical average of 685 transplant recipients per annum (2000–2008) this represents a 64% increase in the number of transplant recipients in 2013.
In 2013 the national organ transplant outcome was 6% higher than 2012 (1,177 organs transplanted compared to 1,110 organs transplanted in 2012). The 2013 outcome represents a 38% increase over 2009 (856), the year the DonateLife Network was established.

When compared to the historical average of 720 organs transplanted per annum (2000–2008) this represents a 64% increase in the number of organs transplanted in 2013.

Kidneys are the most predominant organ donated and transplanted. In 2013, 645 kidneys were transplanted from organ donors. This was 5% higher than the outcome in 2012 (617), and 43% higher than in 2009 (452), the year the DonateLife Network was established.

In 2013 there were also two combined heart/lung transplants. These transplants have not been represented graphically due to the relative numbers when compared with other types of organ transplants.

In 2013 as in 2012, 78% (305) of organ donors were realised from the Donation after Brain Death (DBD)* pathway, with the remaining 22% (86) from the Donation after Circulatory Death [formerly known as Donation after Cardiac Death] (DCD)** pathway.

Of the 144 additional donors in 2013 when compared to the 2009 outcome, 100 donors (69% of the growth) were realised from the DBD pathway and 44 donors (31% 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.
### Living and deceased tissue donations 2012–13

The provisional 2013 outcome of 4,033 tissue donors and 4,196 tissue donations represents a 5% increase over the 2012 outcome of 3,843 tissue donors and of 3,978 tissue donations.

Of the 4,033 tissue donors, 3,805 (94%) were living donors. The remaining 228 (6%) were deceased donors.

The 228 deceased tissue donors gave 391 tissue donations (159 musculoskeletal tissue, 123 skin tissue and 109 cardiovascular tissue).

There were 3,785 living donors who donated femoral heads at the time of hip replacement surgery and 20 cardiovascular donations.

### Deceased donation and transplant rates 2009–13

In 2013 Australia had a donor per million population rate (dpmp) of 16.9 dpmp. This result represents an 8% increase (1.3 dpmp) over the 2012 outcome of 15.6 dpmp and a 48% increase over 2009 (11.4 dpmp), the year the DonateLife Network was established.

Using the international standard measure of organs transplanted per million population (otpmp), Australia achieved an outcome of 50.9 otpmp in 2013 from deceased donors. This result represents a 4% increase over the 2012 outcome (48.8 otpmp) and a 29% increase over 2009 (39.5 otpmp), the year the DonateLife Network was established.

### Australian Bureau of Statistics revised statistics

The Australian Bureau of Statistics has revised previously published population data in its latest issue of 3101.0 – Australian Demographic Statistics, June 2013. This has resulted in changes to organ donation and transplantation rates previously published by the Organ and Tissue Authority from 2009 to 2012.

### Tissue donations from living and deceased donors 2012–13

<table>
<thead>
<tr>
<th>Rate</th>
<th>Year</th>
<th>Previously published outcomes</th>
<th>Revised outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transplant recipients per million population</td>
<td>2012</td>
<td>46.4</td>
<td>46.3</td>
</tr>
<tr>
<td>Organs transplanted per million population</td>
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<td>48.8</td>
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<tr>
<td>Organs transplanted per million population</td>
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<td>Donors per million population</td>
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</tr>
<tr>
<td>Transplant recipients per million population</td>
<td>2009</td>
<td>37.1</td>
<td>37.2</td>
</tr>
<tr>
<td>Organs transplanted per million population</td>
<td>2009</td>
<td>39.0</td>
<td>39.5</td>
</tr>
</tbody>
</table>

1 Musculoskeletal numbers are incomplete as one tissue bank in New South Wales was unable to supply a complete dataset for December.
**Eye donors 2009–13**

The 2013 outcome of 1,144 eye donors represents a 2% decrease on the 2012 outcome of 1,169 eye donors and a 24% increase in eye donations over 2009 (922 donors).

In 99% of cases, both eyes were retrieved from the donors; however, eight of the 1,144 eye donors in 2013, donated only one eye, accounting for a total of 2,280 eyes donated or retrieved in the period.

**Corneal transplants 2009–13**

The 2013 outcome of 1,932 corneal transplants represents a 0.5% decrease on the 2012 outcome of 1,942 corneal transplants.

This represents a 32% increase in corneal transplants over 2009 (1,467 transplants).

**Tissue transplant outcomes 2013**

In 2013 the Australian Tissue Banks worked together with the Organ and Tissue Authority to expand the national tissue dataset to include data on notified tissue grafts transplanted and notified tissue transplant recipients.

Provisional data indicates that tissue donors enabled 6,248 tissue transplants improving the lives of 3,691 tissue transplant recipients.

Of the 6,248 notified tissue transplants there were 5,289 musculoskeletal tissue, 166 cardiovascular tissue and 793 skin tissue transplants.

Tissue transplant recipients included 3,436 recipients of musculoskeletal tissue, 166 recipients of cardiovascular tissue and 89 recipients of skin tissue.

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1. When a tissue bank is notified of a tissue transplant it is referred to as a notified tissue graft. Not all tissue transplants are notified.
2. Musculoskeletal numbers are incomplete as one tissue bank in New South Wales was unable to supply a complete dataset for December.
3. Grafts Transplanted and Transplant Recipient data may or may not be a direct outcome of tissue donations reported for 2013, as tissue can be stored for a period of time before the graft is transplanted.
4. Outcome data captures the number of notified grafts transplanted and the number of tissue transplant recipients who may receive one or more tissue grafts.
5. While 15 Australian Tissue Banks contribute to donation data, only 12 Australian Tissue Banks contribute to outcome data.
This trend is calculated by taking a Henderson moving average of the actual outcomes to smooth out the month to month random volatility. It is designed to indicate the broad direction of a series rather than specific month to month outcomes.

The deceased organ donation trend has increased over time from less than 20 donors a month in January 2009 to 30 donors a month by December 2013.

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 leading countries 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. The key elements of international reform models that have now been adopted by Australia are:

1. An appropriate legal and ethical framework
2. A national coordinating body
3. Specialist training for clinical staff in management of the deceased donation process and family donation conversations
4. 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.
Australia’s potential deceased organ donor population 2013

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 wishes of their family member before donation can occur.

By way of example, in 2013 the Australian population was 23,130,900 with an estimated 149,500 deaths occurring. Of these, approximately 75,400 deaths occurred in hospitals with around 725 potential donors identified – around 1% of the hospital deaths.

Requests to families for donation were made in around 700 cases, with approximately 430 families consenting to donation. In just under 40 cases where family consent was given, donation did not proceed for a variety of clinical reasons.

The resulting 391 deceased organ donors enabled 1,177 organs to be transplanted, transforming the lives of 1,122 transplant recipients.

Source:
1. 30 June 2013 estimated resident population ABS 3101.0 Australian Demographic Statistics, June 2013. Released 17/12/2013.
4. Extrapolated from September 2013 DonateLife Audit Report, Organ and Tissue Authority.
5. ANZOD monthly report on Deceased Organ Donation in Australia, January 2014.