



## SECTION 3

### Deceased Organ Donation Pathway

#### SUMMARY

This chapter reports on the organ donation pathway. It includes the known intention to be an organ donor; cause of death and events leading up to admission to hospital; the initial mention to donate; whether the donation did not proceed or proceeded down the donation after brain death or donation after circulatory death pathway, the maintenance and terminal treatment of the donor and the outcome of the retrieval procedure resulting in transplantation of donated organs.

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## Donor Registration

The Registry collects the known intention to be an organ donor in the form of a decision recorded on a national register or on a state driver's license.

In Australia, the Australian Organ Donor Register<sup>1</sup> is the only national register for people to record their decision about becoming an organ and tissue donor for transplantation after death. This provides a record of a person's donation decision for families and clinicians in the event of their death and can only be verified by authorised medical personnel.

Only people aged 18 years and over can register their legally valid consent or objection on the Australian Organ Donor Register. People aged less than 18 years can become organ and tissue donors, although consent will need to be obtained from a family member at the time of death.

**Table 3.1 Donors Enrolled in the Australian Organ Donor Registry 2016 (2015)**

	QLD	NSW	ACT	VIC	TAS	SA	NT	WA	AUST
<b>Registered as Yes</b>	25 (17)	54 (53)	5 (4)	30 (30)	2 (5)	28 (15)	3 (1)	23 (16)	170 (141)
<b>Registered as No</b>	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>Not Registered</b>	67 (50)	70 (65)	13 (9)	96 (87)	9 (4)	10 (23)	3 (3)	23 (26)	291 (267)
<b>Not Accessed</b>	14 (5)	9 (9)	2 (0)	14 (9)	0 (0)	2 (4)	0 (0)	1 (0)	42 (27)
<b>Total</b>	<b>106 (72)</b>	<b>133 (127)</b>	<b>20 (13)</b>	<b>140 (126)</b>	<b>11 (9)</b>	<b>40 (42)</b>	<b>6 (4)</b>	<b>47 (42)</b>	<b>503 (435)</b>

<sup>1</sup>The Australian Organ Donor Register (the Donor Register) is managed by the Department of Human Services on behalf of the Australian Government. The Donor Register is the only national register for people to record their decision about becoming an organ and tissue donor for transplantation after death. Registering is voluntary and people have complete choice over which organs and tissues they wish to donate. If a person does not want to become an organ and tissue donor, they can register their decision not to donate on the Donor Register which is available at <http://www.medicareaustralia.gov.au/provider/patients/aodr/index.jsp>

## Coroner's Cases

Table 3.4 shows the number of donor cases subject to Coronial inquiry. In Australia, 47% of donors in 2016 were subject to Coronial inquiry, compared to 49% in 2015. In New Zealand, it was 33% for 2016 and 47% in 2015.

**Table 3.4 Coroner's Cases 2012 - 2016**

	Australia					New Zealand				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
Yes	153	187	166	211	235	19	10	23	25	20
No	201	204	212	224	268	19	26	23	28	41
Total	354	391	378	435	503	38	36	46	53	61

Table 3.5 shows the number of Australian Coroner's cases by jurisdiction and the number of Coroner's cases in New Zealand for 2016 compared to 2015.

**Table 3.5 Coroner's Cases by State and Country 2016 (2015)**

	QLD	NSW	ACT	VIC	TAS	SA	NT	WA	AUST	NZ
<b>Yes</b>	51 (35)	47 (43)	10 (6)	73 (74)	4 (3)	22 (26)	2 (2)	26 (22)	235 (211)	20 (25)
<b>No</b>	55 (37)	86 (84)	10 (7)	67 (52)	7 (6)	18 (16)	4 (2)	21 (20)	268 (224)	41 (28)
<b>Total</b>	<b>106 (72)</b>	<b>133 (127)</b>	<b>20 (13)</b>	<b>140 (126)</b>	<b>11 (9)</b>	<b>40 (42)</b>	<b>6 (4)</b>	<b>47 (42)</b>	<b>503 (435)</b>	<b>61 (53)</b>

## Cause of Death – All Donors

In Australia and New Zealand, road trauma continues to be a reducing cause of death while cerebrovascular accident (CVA) has been increasing in Australia since 1989, although in New Zealand figures have remained steady.

In Australia for the period 2012-2016, intracranial haemorrhage accounted for an overall 40% of donor deaths and traumatic brain injury for 16%.

Table 3.6 shows the cause of death by percentage in Australia and each Australian State and New Zealand over the last five years.

	QLD	NSW	ACT	VIC	TAS	SA	NT	WA	AUST	NZ
<b>Intracranial Haemorrhage</b>	39%	41%	44%	37%	44%	42%	50%	40%	40%	47%
<b>Traumatic Brain Injury</b>	19%	17%	24%	14%	6%	18%	3%	16%	16%	19%
<b>Cerebral Infarct</b>	4%	6%	5%	8%	8%	6%	13%	8%	6%	6%
<b>Cerebral Hypoxia / Ischaemia</b>	28%	28%	24%	33%	23%	27%	22%	25%	29%	21%
<b>Other Neurological Condition</b>	0%	1%	0%	1%	4%	2%	0%	0%	1%	1%
<b>Non-Neurological Condition</b>	5%	4%	2%	3%	4%	2%	6%	4%	4%	3%

Table 3.7 shows the cause of death of donors by age group in 2016 in Australia and New Zealand. In donors aged 55 years and older, intracranial haemorrhage accounted for 38% of deaths in Australia and 32% in New Zealand in 2016.

In donors aged 15-34 years, cerebral hypoxia/ischaemia accounted for 13.5% of deaths in Australia and 4.9% in New Zealand in 2016.

Cause of Death	Australia					New Zealand				
	0-14	15-34	35-54	55+	n (%)	0-14	15-34	35-54	55+	n (%)
<b>Intracranial Haemorrhage</b>	1	8	80	103	192 (38%)	0	2	8	20	30 (49%)
<b>Traumatic Brain Injury</b>	8	42	18	21	89 (18%)	0	5	2	1	8 (13%)
<b>Cerebral Infarct</b>	0	2	12	15	29 (6%)	0	2	3	1	6 (10%)
<b>Cerebral Hypoxia / Ischaemia</b>	16	68	68	26	178 (35%)	0	8	4	3	15 (25%)
<b>Other Neurological Condition</b>	0	2	6	0	8 (2%)	0	2	0	0	2 (3%)
<b>Non-Neurological Condition</b>	1	1	2	3	7 (1%)	0	0	0	0	0 (0%)
<b>Total</b>	<b>26</b>	<b>123</b>	<b>186</b>	<b>168</b>	<b>503</b>	<b>0</b>	<b>19</b>	<b>17</b>	<b>25</b>	<b>61</b>

The cause of death by age group is shown in Table 3.8 for each Australian State for 2016.

		0-14	15-34	35-54	55+	Total
QLD	Intracranial Haemorrhage	0	3	15	16	34
	Traumatic Brain Injury	2	15	6	3	26
	Cerebral Infarct	0	0	3	1	4
	Cerebral Hypoxia / Ischaemia	5	18	16	1	40
	Other	0	1	1	0	2
	<b>Total</b>	<b>7</b>	<b>37</b>	<b>41</b>	<b>21</b>	<b>106</b>
NSW	Intracranial Haemorrhage	1	1	24	28	54
	Traumatic Brain Injury	0	4	4	8	16
	Cerebral Infarct	0	0	5	6	11
	Cerebral Hypoxia / Ischaemia	6	10	17	14	47
	Other	0	1	3	1	5
	<b>Total</b>	<b>7</b>	<b>16</b>	<b>53</b>	<b>57</b>	<b>133</b>
ACT	Intracranial Haemorrhage	0	0	1	6	7
	Traumatic Brain Injury	0	4	0	2	6
	Cerebral Infarct	0	0	0	1	1
	Cerebral Hypoxia / Ischaemia	0	1	2	3	6
	Other	0	0	0	0	0
	<b>Total</b>	<b>0</b>	<b>5</b>	<b>3</b>	<b>12</b>	<b>20</b>
VIC	Intracranial Haemorrhage	0	1	17	28	46
	Traumatic Brain Injury	4	12	6	7	29
	Cerebral Infarct	0	0	2	5	7
	Cerebral Hypoxia / Ischaemia	5	24	16	6	51
	Other	1	1	3	2	7
	<b>Total</b>	<b>10</b>	<b>38</b>	<b>44</b>	<b>48</b>	<b>140</b>
TAS	Intracranial Haemorrhage	0	0	4	2	6
	Traumatic Brain Injury	0	0	0	0	0
	Cerebral Infarct	0	0	0	0	0
	Cerebral Hypoxia / Ischaemia	0	2	2	0	4
	Other	0	0	1	0	1
	<b>Total</b>	<b>0</b>	<b>2</b>	<b>7</b>	<b>2</b>	<b>11</b>
SA	Intracranial Haemorrhage	0	0	7	13	20
	Traumatic Brain Injury	1	4	1	1	7
	Cerebral Infarct	0	1	0	0	1
	Cerebral Hypoxia / Ischaemia	0	3	7	2	12
	Other	0	0	0	0	0
	<b>Total</b>	<b>1</b>	<b>8</b>	<b>15</b>	<b>16</b>	<b>40</b>
NT	Intracranial Haemorrhage	0	0	2	1	3
	Traumatic Brain Injury	0	0	0	0	0
	Cerebral Infarct	0	0	1	0	1
	Cerebral Hypoxia / Ischaemia	0	2	0	0	2
	Other	0	0	0	0	0
	<b>Total</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>6</b>
WA	Intracranial Haemorrhage	0	3	10	9	22
	Traumatic Brain Injury	1	3	1	0	5
	Cerebral Infarct	0	1	1	2	4
	Cerebral Hypoxia / Ischaemia	0	8	8	0	16
	Other	0	0	0	0	0
	<b>Total</b>	<b>1</b>	<b>15</b>	<b>20</b>	<b>11</b>	<b>47</b>

## Cardiopulmonary Resuscitation

Cardiopulmonary resuscitation is recorded for events leading up to the admission and hospital stay for the patient prior to organ donation. Table 3.9 shows the number of recorded events for cardiopulmonary resuscitation for Australia and New Zealand donors.

**Table 3.9 Cardiopulmonary Resuscitation, 2012 - 2016**

	Australia					New Zealand				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
<b>Yes</b>	130	155	170	212	236	14	8	15	25	23
<b>No</b>	224	234	207	223	266	24	27	31	28	38
<b>Unknown</b>	0	2	1	0	1	0	1	0	0	0
<b>Total</b>	<b>354</b>	<b>391</b>	<b>378</b>	<b>435</b>	<b>503</b>	<b>38</b>	<b>36</b>	<b>46</b>	<b>53</b>	<b>61</b>

**Table 3.10 Cardiopulmonary Resuscitation by Australian State, 2016 (2015)**

	QLD	NSW	ACT	VIC	TAS	SA	NT	WA
<b>Yes</b>	56 (38)	52 (60)	9 (7)	73 (60)	5 (5)	18 (20)	2 (3)	21 (19)
<b>No</b>	50 (34)	81 (67)	11 (6)	66 (66)	6 (4)	22 (22)	4 (1)	26 (23)
<b>Unknown</b>	0 (0)	0 (0)	0 (0)	1 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>Total</b>	<b>106 (72)</b>	<b>133 (127)</b>	<b>20 (13)</b>	<b>140 (126)</b>	<b>11 (9)</b>	<b>40 (42)</b>	<b>6 (4)</b>	<b>47 (42)</b>

## Initial Mention of Organ Donation

In 2016, organ donation was predominantly raised by Intensive Care Clinicians and Registrars; 53% of cases in Australia and 82% in New Zealand, as shown in Table 3.11.

In Australia, organ donation was raised by a Donor Specialist on 51 (10%) occasions which is a 4% increase from 2015 (Table 3.11). Organ donation in New Zealand was initially mentioned by a Donor Coordinator in one case. In 2016, 34% of families raised the subject of organ donation in Australia, up 3%, compared to 32% in 2015. In New Zealand, 8% of families raised donation in 2016 (15% in 2015). (Table 3.11)

See Table 3.12 for individual State and Territory statistics.

**Table 3.11 Initial Mention of Organ Donation 2012 - 2016**

	Australia					New Zealand				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
<b>Donor Specialist</b>	1	21	45	29	51	0	1	2	0	1
<b>ICU Consultant</b>	214	242	186	228	246	33	28	35	37	48
<b>ICU Trainee (E.g. Registrar)</b>	15	13	24	25	21	1	0	2	3	2
<b>Social Worker</b>	0	0	1	0	0	0	0	0	0	0
<b>Other</b>	3	5	0	2	8	2	2	1	3	2
<b>Family</b>	110	100	112	142	169	2	5	5	8	5
<b>Nursing Staff</b>	4	2	1	1	1	0	0	1	2	3
<b>Emergency Clinician</b>	7	8	9	8	7	0	0	0	0	0
<b>TOTAL</b>	<b>354</b>	<b>391</b>	<b>378</b>	<b>435</b>	<b>503</b>	<b>38</b>	<b>36</b>	<b>46</b>	<b>53</b>	<b>61</b>

**Table 3.12 Initial Mention of Organ Donation by Australian State 2016 (2015)**

	QLD	NSW	ACT	VIC	TAS	SA	NT	WA
<b>Donor Specialist</b>	7 (1)	24 (18)	1 (0)	11 (7)	6 (2)	0 (1)	2 (0)	0 (0)
<b>ICU Consultant</b>	54 (51)	65 (70)	7 (9)	65 (54)	2 (4)	31 (25)	1 (1)	21 (14)
<b>ICU Trainee (E.g. Registrar)</b>	2 (0)	2 (6)	2 (0)	12 (10)	1 (0)	1 (4)	0 (0)	1 (5)
<b>Social Worker</b>	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>Other</b>	0 (0)	3 (1)	1 (1)	3 (0)	0 (0)	0 (0)	0 (0)	1 (0)
<b>Family</b>	43 (20)	36 (29)	8 (3)	47 (54)	1 (2)	8 (12)	3 (3)	23 (19)
<b>Nursing Staff</b>	0 (0)	0 (0)	0 (0)	0 (1)	1 (0)	0 (0)	0 (0)	0 (0)
<b>Emergency Clinician</b>	0 (0)	3 (3)	1 (0)	2 (0)	0 (1)	0 (0)	0 (0)	1 (4)
<b>TOTAL</b>	<b>106 (72)</b>	<b>133 (127)</b>	<b>20 (13)</b>	<b>140 (126)</b>	<b>11 (9)</b>	<b>40 (42)</b>	<b>6 (4)</b>	<b>47 (42)</b>

## Donation Not Proceeding

An intended donor is a person for whom authority has been given, but organ donation did not proceed. A donation may not proceed due to positive virology tests, cardiac arrest or further investigations discovered a cancer or infection. In 2016, the main reason donors did not proceed to organ donation was due to disease of organ.

Table 3.13 represents the number of non-proceeding DBD and DCD donors for each State/Territory and overall for Australia and New Zealand compared to the number of actual donors who did proceed to theatre for organ donation. In Australia, there were 143 donors who did not proceed down the pathway of solid organ donation, of which 38 (27%) were DBD and 101 (71%) were DCD and in New Zealand there were no DBD and only one DCD intended donors.

**Table 3.13 Actual vs Intended (Non-Proceeding) Donors 2016**

	DBD		DCD		Total	
	Actual	Intended	Actual	Intended	Actual	Intended
<b>QLD</b>	89 (95%)	5 (5%)	17 (55%)	14 (45%)	106 (84%)	20 (16%)
<b>NSW</b>	97 (92%)	9 (8%)	36 (64%)	20 (36%)	133 (81%)	31 (19%)
<b>ACT</b>	15 (94%)	1 (6%)	5 (83%)	1 (17%)	20 (91%)	2 (9%)
<b>VIC</b>	84 (89%)	10 (11%)	56 (55%)	46 (45%)	140 (71%)	56 (29%)
<b>TAS</b>	10 (83%)	2 (17%)	1 (50%)	1 (50%)	11 (73%)	4 (27%)
<b>SA</b>	34 (85%)	6 (15%)	6 (38%)	10 (63%)	40 (71%)	16 (29%)
<b>NT</b>	4 (80%)	1 (20%)	2 (67%)	1 (33%)	6 (75%)	2 (25%)
<b>WA</b>	42 (91%)	4 (9%)	5 (38%)	8 (62%)	47 (80%)	12 (20%)
<b>AUSTRALIA</b>	<b>375 (91%)</b>	<b>38 (9%)</b>	<b>128 (56%)</b>	<b>101 (44%)</b>	<b>503 (78%)</b>	<b>143 (22%)</b>
<b>NEW ZEALAND</b>	<b>55 (100%)</b>	<b>-</b>	<b>6 (86%)</b>	<b>1 (14%)</b>	<b>61 (98%)</b>	<b>1 (2%)</b>

The reasons for donations not proceeding are described in Table 3.14

**Table 3.14 Reasons Why Donation Did Not Proceed 2016, Australia**

Planned donation after circulatory death but died outside of time limit	51
Medical contraindication discovered during consideration for donation	49
No suitable Recipients available	21
Declined by family after initially giving consent	7
Unexpected cardiac arrest	3
Didn't progress to brain death	2
Refusal by Coroner / Pathologist	2
Climbing urea and electrolytes and inotropic support	1
Clinical condition improved	1
Failed physiological support	1
High risk	1
Logistics - timeframe to transplantation	1
Logistics - No available retrieval team	1
Organs declined as not medically suitable	1
Stood down (timeframes changed)	1
<b>TOTAL</b>	<b>143</b>



## Donation After Circulatory Death

The majority of organs are donated by the Donation after Brain Death (DBD) pathway. After certification of brain death, the donor remains on the ventilator and the removal of organs may occur many hours later. The Donation after Circulatory Death (DCD) pathway is defined by patients with irreversible cessation of circulation. As soon as cessation of circulation is confirmed, the retrieval procedure is commenced in order to minimise warm ischaemic time.

The number of DCD donors since 1989 has risen to 804 donors for Australia and 28 DCD donors for New Zealand.

In Australia, in 2016, there were 128 DCD donors and in New Zealand there were six DCD donors.

Table 3.15 shows the number of DCD Donors by jurisdiction.

<b>Table 3.15 Donation after circulatory Death, 2012-2016</b>										
<b>Year</b>	<b>QLD</b>	<b>NSW</b>	<b>ACT</b>	<b>VIC</b>	<b>TAS</b>	<b>SA</b>	<b>NT</b>	<b>WA</b>	<b>AUST</b>	<b>NZ</b>
<b>2012</b>	16	19	2	30	0	4	1	5	<b>77</b>	<b>0</b>
<b>2013</b>	24	15	0	35	3	2	2	5	<b>86</b>	<b>2</b>
<b>2014</b>	20	27	3	47	0	4	2	4	<b>107</b>	<b>6</b>
<b>2015</b>	19	40	4	47	0	5	0	5	<b>120</b>	<b>5</b>
<b>2016</b>	17	36	5	56	1	6	2	5	<b>128</b>	<b>6</b>

The first multi-organ DCD was performed in South Australia in 2006.

In 2016, the mean age for a DCD donor was 46.2 years and the age range was 0.3 to 54.2 years in Australia.

In New Zealand, the mean age of DCD was 42.9 years and the age range was 17.1 years to 57.9 years.

Causes of death leading to DCD in Australia, in 2016 were intracranial haemorrhage (31), cerebral hypoxia/ischaemia (50), traumatic brain injury (20), cerebral infarct (15), other neurological conditions (5) and non-neurological conditions (7).

Causes of death leading to DCD in New Zealand in 2016 were intracranial haemorrhage (1), cerebral hypoxia/ischaemia (3) and cerebral infarct (2).

## Time from Admission to Brain Death

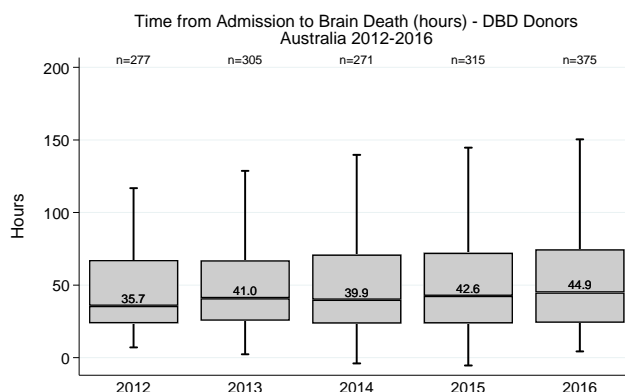
### Australia

In 2016, 24% of Australian donors were declared brain dead within 24 hours of hospital admission.

66 percent of donors were declared brain dead between 1 – 5 days of hospital admission.

10 percent of donors (36) were in hospital for more than 5 days before being declared brain dead.

Figure 3. 1 Time from Admission to Brain Death, AUS



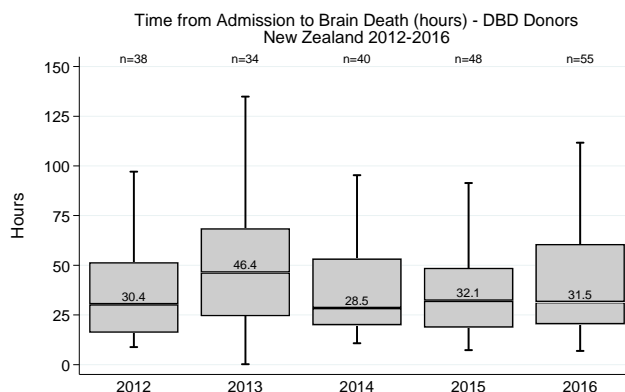
### New Zealand

In 2016, 35% of New Zealand DBD donors were declared brain dead within 24 hours of hospital admission.

56 percent of DBD donors were declared brain dead between 1 – 5 days of hospital admission.

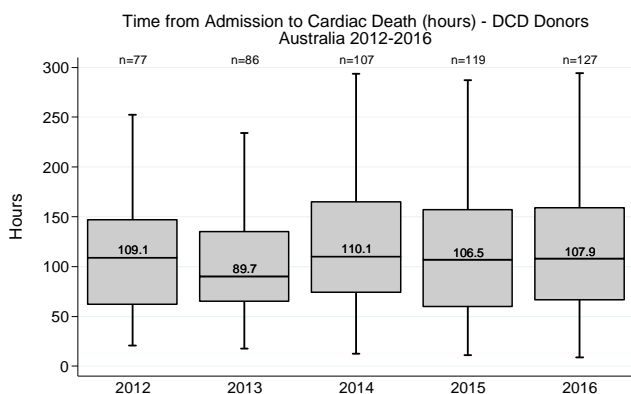
9 percent of DBD donors (5) were in hospital for more than 5 days before being declared brain dead.

Figure 3. 2 Time from Admission to Brain Death, NZ



## Time from Admission to Circulatory Death

Figure 3. 3 Time from Admission to Cardiac Death, AUS



### Australia

As shown in Figure 3.3, in 2016, 2% of Australian DCD donors died within 24 hours of hospital admission.

52% of DCD donors died between 1-5 days of hospital admission.

45 percent of DCD donors (57) were in hospital for more than five days prior to death.)

Time of admission to hospital was unknown for only one DCD donor.

### New Zealand

In New Zealand, 83% of DCD donors died between 1-5 days of hospital admission.

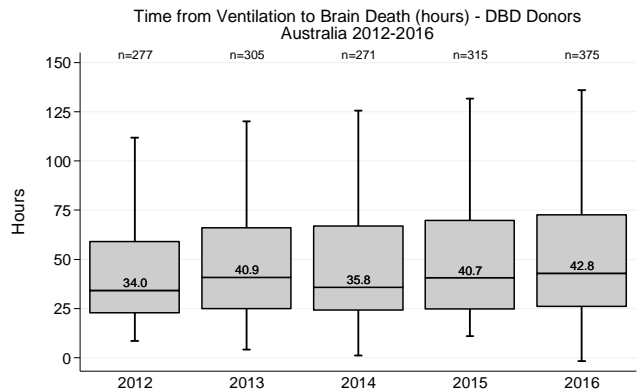
17 percent of DCD donors (1) were in hospital for more than five days prior to death.)

# Time from Ventilation to Brain Death

## Australia

In 2016, the median time from ventilation to brain death was 42.8 hours.

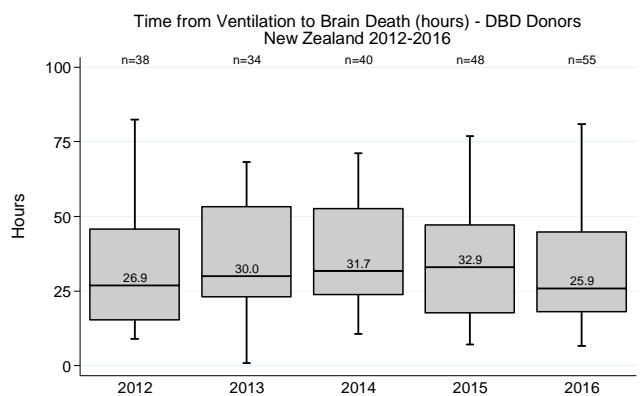
Figure 3. 4 Time from Ventilation to Brain Death, AUS



## New Zealand

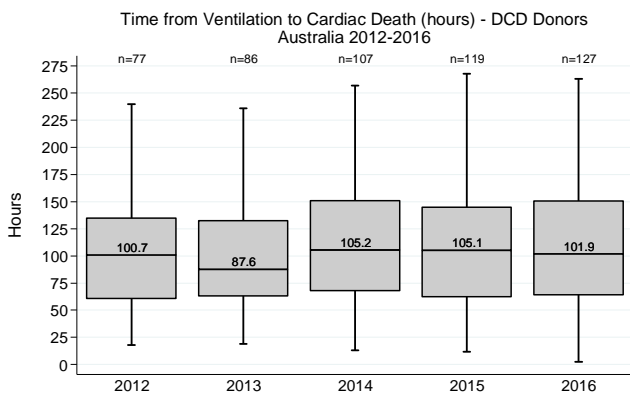
In 2016, the median time from ventilation to brain death was 25.9 hours.

Figure 3. 5 Time from Ventilation to Brain Death, NZ



# Time from Ventilation to Circulatory Death

Figure 3. 6 Time from Ventilation to Cardiac Death, AUS



## Australia

Figure 3.6 shows that in 2016, the median time from ventilation to circulatory death was 101.9 hours.

## New Zealand

The median time in New Zealand in 2016 from ventilation to circulatory death was 105.6 hours.

## Time from Brain Death to Donation

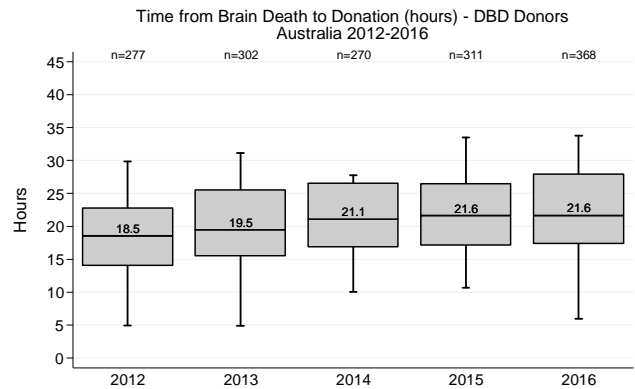
### Australia

In 2016, 35 DBD donors (9%) underwent aortic cross clamp within twelve hours of the certification of brain death.

The median time was 21.6 hours.

Cross clamp did not proceed in 7 Australian donors.

Figure 3. 7 Time from Brain Death to Donation, AUS



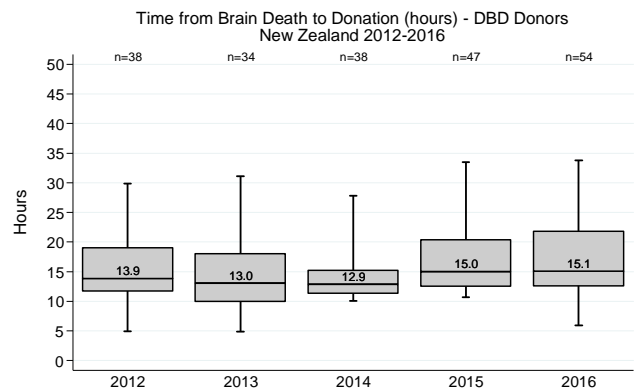
### New Zealand

In 2016, 17 DBD (31%) underwent aortic cross clamp within twelve hours of the certification of brain death.

The median time was 15.1 hours.

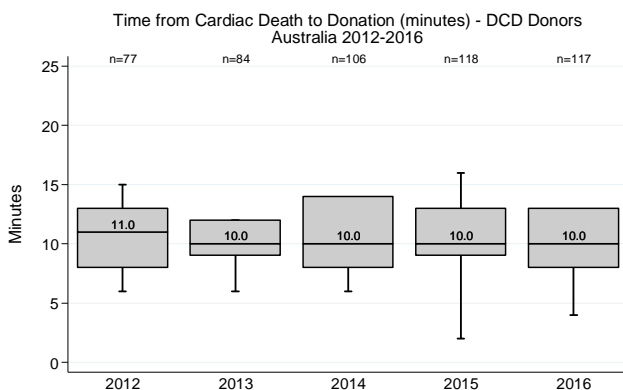
Cross clamp did not proceed in 1 New Zealand donor.

Figure 3. 8 Time from Brain Death to Donation, AUS



## Time from Circulatory Death to Donation

Figure 3. 9 Time from Cardiac Death to Donation, AUS



### Australia

In 2016, 63 DCD donors (49%) underwent aortic cross clamp within 12 minutes of the certification of brain death. The median time was 10 minutes.

### New Zealand

In 2016, 5 DCD (83%) underwent aortic cross clamp within 12 minutes of the certification of brain death. The median time was 9 minutes.

For DCD donors, the time from circulatory death to time of cold perfusion and for DBD donors, the time from brain death to time of cross clamp is used for the analysis.

## Summary – Organs Requested, Consent Given, Retrieved and Transplanted

Table 3.16 shows the outcome of organs requested in 2016 (2015). The information on request for organ donation, refers only to those patients who become actual donors. The reasons for organs not requested, not retrieved or not transplanted are documented for all of the specific organs in Chapter 5 – Organ Data.

The reason organs were not used are identified in Chapter 5 - Organ Data and in Supplement 1 for Australia and Supplement 2 for New Zealand. Organs retrieved and used for research were not intended for transplantation in the first instance

**Table 3.16 Summary for Organ Donation Pathway by Organ Type 2016 (2015)**

	Kidneys*	Liver	Heart	Lungs*	Pancreas	Intestines	
<b>Australia</b>	<b>Organs for donation</b>	1006 (870)	503 (435)	503 (435)	1006 (870)	503 (435)	503 (435)
	<b>Organs Requested</b>	981 (828)	464 (389)	393 (306)	912 (784)	406 (328)	246 (185)
	<b>Organs Consented</b>	977 (824)	456 (377)	370 (281)	886 (752)	394 (314)	213 (147)
	<b>Organs Retrieved</b>	883 (763)	298 (264)	125 (103)	410 (394)	120 (121)	1 (1)
	<b>Utilised organs for transplantation</b>	841 (718)	283 (247)	124 (95)	386 (375)	52 (45)	1 (1)
	<b>Recipients transplanted<sup>^</sup></b>	821 (703)	314 (264)	124 (95)	196 (193)	52 (45)	1 (1)
<b>New Zealand</b>	<b>Organs for donation</b>	122 (106)	61 (53)	61 (53)	122 (106)	61 (53)	61 (53)
	<b>Organs Requested</b>	120 (100)	60 (50)	50 (40)	110 (92)	45 (39)	0 (0)
	<b>Organs Consented</b>	120 (100)	60 (50)	50 (39)	110 (92)	45 (38)	0 (0)
	<b>Organs Retrieved</b>	99 (78)	51 (41)	11 (12)	40 (50)	4 (3)	0 (0)
	<b>Utilised organs for transplantation</b>	95 (73)	51 (41)	11 (12)	40 (50)	4 (3)	0 (0)
	<b>Recipients transplanted<sup>^^</sup></b>	90 (73)	53 (46)	11 (12)	20 (25)	4 (3)	0 (0)

\*Kidneys and Lungs are counted as two separate organs (i.e. left and right)

<sup>^</sup>For Australia 2016(2015), includes 20(15) Double adult/Enbloc Kidneys, 64(35) Partial Livers, 6(11) Single Lung and 190(182) Double Lung Transplants.

<sup>^^</sup>For New Zealand 2016(2015), includes 5(0) Double-adult/Enbloc Kidneys, 4(10) Partial Livers, 0(0) Single Lung Transplants and 20(25) Double Lung Transplants.

## Multiple Organ Retrieval

For Australia, there were 503 actual deceased organ donors in 2016. Of those donors, 489 donors had at least one organ retrieved; and 480 resulted in at least one organ transplanted. There were 123 (24%) Australian donors in 2016 who had a single organ retrieved and transplanted. Kidney only donation occurred in 88 cases, 21 donating a liver, one donating a heart and 13 donating lungs. In 2016, 366 (73%) donors had two or more organs retrieved for the purpose of transplantation. (Table 3.17)

Similarly, for New Zealand, there were 61 actual deceased organ donors in 2016. Of those donors, 59 had at least one organ retrieved; and all 59 resulted in at least one organ transplanted. There were 13 (21%) single organ donors in 2016, six donating kidneys, six donating a liver and one donating lungs. In 2016, 46 (75%) of donors had two or more organs retrieved for the purpose of transplantation. (Table 3.17)

**Table 3.17 Multiple Organs Retrieved per Donor 2012 - 2016**

Organs Retrieved ^	Australia					New Zealand				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
<b>No Organs</b>	12 (3%)	16 (4%)	8 (2%)	8 (2%)	14 (3%)	4 (11%)	0 (0%)	3 (7%)	3 (6%)	2 (3%)
<b>One</b>	87 (25%)	86 (22%)	86 (23%)	118 (27%)	123 (24%)	5 (13%)	9 (25%)	12 (26%)	11 (21%)	13 (21%)
<b>Two</b>	107 (30%)	120 (31%)	107 (28%)	114 (26%)	166 (33%)	12 (32%)	13 (36%)	8 (17%)	14 (26%)	25 (41%)
<b>Three</b>	76 (21%)	100 (26%)	91 (24%)	95 (22%)	99 (20%)	8 (21%)	8 (22%)	12 (26%)	19 (36%)	13 (21%)
<b>Four</b>	50 (14%)	50 (13%)	51 (13%)	62 (14%)	62 (12%)	9 (24%)	6 (17%)	10 (22%)	5 (9%)	6 (10%)
<b>Five</b>	22 (6%)	19 (5%)	35 (9%)	37 (9%)	39 (8%)	0 (0%)	0 (0%)	1 (2%)	1 (2%)	2 (3%)
<b>Six</b>	0 (0%)	0 (0%)	0 (0%)	1 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)

**Table 3.18 Comparison of Multiple Organs Retrieved per Donor by State and Country 2016**

Organs Retrieved ^	QLD	NSW	ACT	VIC	TAS	SA	NT	WA	AUST	NZ
<b>No Organs</b>	3 (3%)	4 (3%)	2 (10%)	2 (1%)	1 (9%)	1 (3%)	0 (0%)	1 (2%)	14 (3%)	2 (3%)
<b>1</b>	20 (19%)	45 (34%)	5 (25%)	35 (25%)	2 (18%)	7 (18%)	2 (33%)	7 (15%)	123 (24%)	13 (21%)
<b>2</b>	40 (38%)	38 (29%)	5 (25%)	48 (34%)	5 (45%)	7 (18%)	2 (33%)	21 (45%)	166 (33%)	25 (41%)
<b>3</b>	25 (24%)	25 (19%)	4 (20%)	21 (15%)	2 (18%)	9 (23%)	2 (33%)	11 (23%)	99 (20%)	13 (21%)
<b>4</b>	12 (11%)	14 (11%)	1 (5%)	19 (14%)	1 (9%)	10 (25%)	0 (0%)	5 (11%)	62 (12%)	6 (10%)
<b>5</b>	6 (6%)	7 (5%)	3 (15%)	15 (11%)	0 (0%)	6 (15%)	0 (0%)	2 (4%)	39 (8%)	2 (3%)
<b>6</b>	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)

^ The organ types retrieved from a donor are: Kidney, Liver, Lung, Heart, Pancreas and Intestine.

**Suggested Citation:**

ANZOD Registry, 2017 Annual Report, Section 3: Deceased Organ Donor Pathway. Australian and New Zealand Dialysis and Transplant Registry, Adelaide, South Australia. 2017 Available at [www.anzdata.org.au](http://www.anzdata.org.au)