Chapter 3

Pathway of Organ Donation

in Australia and New Zealand

Pathway of Organ Donation

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

Donor Intention

Figures 3.1 and 3.2 show whether the donor had recorded an intention to donate through indication on their driver's licence. In 2013, 19% (76) of Australian organ donors and 3% (one) of New Zealand organ donors had indicated their intention to be an organ donor on their driver's license.

Figure 3.3 shows the number of donors enrolled on the Australian Organ Donation Registry, which commenced in 2000.

Figure 3.1

Driver's Licence Intention Status 2009 - 2013

Intention	Australia					New Zealand				
	2009	**2010**	**2011**	**2012**	**2013**	**2009**	**2010**	**2011**	**2012**	**2013**
Yes	73 (30%)	85 (28%)	80 (24%)	77 (22%)	76 (19%)	7 (16%)	5 (12%)	4 (11%)	3 (8%)	1 (3%)
Not Applicable *	49	126	113	158	153	3	0	3	3	2
No	31	31	45	38	77	0	0	1	2	2
Unknown	94	67	99	81	85	33	36	30	30	31
Total	**247**	**309**	**337**	**354**	**391**	**43**	**41**	**38**	**38**	**36**

* 'Not Applicable' is recorded for those donors who do not poses an Australian or New Zealand drivers license (for example infants, students or those adults chose not to obtain a drivers licence)

Figure 3.2

Australian States 2013 (2012)
Driver's Licence Intention Status

Intention	QLD	NSW	ACT	VIC	TAS	SA	NT	WA
Yes	2 (5)	48 (51)	2 (4)	2 (4)	1 (0)	20 (11)	0 (1)	1 (1)
Not Applicable *	70 (69)	11 (7)	2 (3)	38 (41)	1 (8)	2 (2)	3 (1)	26 (27)
No	4 (2)	34 (23)	2 (5)	9 (0)	2 (0)	6 (1)	3 (4)	17 (3)
Unknown	1 (2)	9 (7)	0 (0)	61 (47)	4 (7)	6 (15)	1 (2)	3 (1)
Total	**77 (78)**	**102 (88)**	**6 (12)**	**110 (92)**	**8 (15)**	**34 (29)**	**7 (8)**	**47 (32)**

Pathway of Organ Donation

Figure 3.3

Donors Enrolled on the Australian Organ Donor Registry 2013 (2012)									
	QLD	**NSW**	**ACT**	**VIC**	**TAS**	**SA**	**NT**	**WA**	**AUST**
Yes	20 (28)	31 (31)	3 (7)	21 (16)	4 (6)	15 (5)	2 (3)	17 (14)	113 (110)
Not Applicable	7 (4)	7 (3)	0 (1)	2 (6)	0 (1)	0 (0)	0 (1)	9 (3)	25 (19)
No	0 (1)	2 (0)	0 (0)	1 (0)	0 (1)	1 (2)	0 (0)	0 (1)	4 (5)
Not Registered	47 (42)	61 (51)	3 (4)	82 (67)	4 (6)	18 (22)	5 (4)	21 (13)	241 (209)
Not Accessed	3 (3)	1 (3)	0 (0)	4 (3)	0 (1)	0 (0)	0 (0)	0 (1)	8 (11)
Unknown	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Total	77 (78)	102 (88)	6 (12)	110 (92)	8 (15)	34 (29)	7 (8)	47 (32)	391 (354)

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. http://www.medicareaustralia.gov.au/provider/patients/aodr/index.jsp

Coroner's Cases

In Australia, 48% of donors in 2013 were subject to Coronial inquiry, compared to 43% in 2012. In New Zealand it was 28% for 2013 and 50% in 2012.

Figure 3.4

Coroner's Cases 2009 - 2013										
	Australia					New Zealand				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Yes	106	121	141	153	187	19	18	16	19	10
No	141	188	196	201	204	24	23	22	19	26
Total	247	309	337	354	391	43	41	38	38	36

Figure 3.5

Australian Coroner's Cases by State 2013 (2012)										
	QLD	**NSW**	**ACT**	**VIC**	**TAS**	**SA**	**NT**	**WA**	**AUST**	**NZ**
Yes	42 (39)	44 (34)	3 (6)	44 (34)	6 (7)	17 (13)	5 (2)	26 (18)	187 (153)	10 (19)
No	35 (39)	58 (54)	3 (6)	66 (58)	2 (8)	17 (16)	2 (6)	21 (14)	204 (201)	26 (19)
Total	77 (78)	102 (88)	6 (12)	110 (92)	8 (15)	34 (29)	7 (8)	47 (32)	391 (354)	36 (38)

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 2009 - 2013, CVA accounted for an overall 48% of donor deaths and road trauma 12%.

Figure 3.6 shows the cause of death by percentage in Australia and each Australian State and New Zealand over the last 5 years.

Figure 3.7 shows that in 2013, CVA was the main cause of death in donors 35-54 years and 55 years and older, in both Australia and New Zealand, whereas in the younger 15-34 year age group and 14 years and younger, Hypoxia-Anoxia accounted for 26% of all deaths in Australia and 17% in New Zealand .

The cause of death by age group is shown in Figure 3.8 for each Australian State for 2013.

Figure 3.6

Cause of Donor Death by State/Country 2009 - 2013

	QLD	NSW	ACT	VIC	TAS	SA	NT	WA	AUST	NZ
CVA	44%	46%	55%	51%	50%	54%	52%	45%	48%	52%
Trauma (road)	16%	12%	16%	7%	5%	10%	17%	18%	12%	15%
Trauma (non-road)	13%	12%	5%	7%	185	10%	9%	95%	10%	10%
Hypoxia-Anoxia	20%	23%	23%	29%	16%	20%	13%	21%	23%	16%
Cerebral Tumour	1%	1%	0%	0%	0%	0%	0%	1%	1%	1%
Other	6%	5%	2%	6%	11%	6%	9%	6%	6%	6%

Figure 3.7

Cause of Donor Death by Age Group 2013

	Australia					New Zealand				
	Age Groups					Age Groups				
	0-14	15-34	35-54	>=55	Total	0-14	15-34	35-54	>=55	Total
CVA	2	11	64	101	178 (46%)	0	3	14	9	26 (72%)
Trauma (road)	4	24	10	7	45 (12%)	0	1	0	0	1 (3%)
Trauma (non-road)	0	16	8	18	42 (11%)	1	0	0	1	2 (6%)
Hypoxia-Anoxia	9	41	30	23	103 (26%)	1	3	2	0	6 (17%)
Cerebral Tumour	0	0	2	0	2 (1%)	0	0	0	0	0 (0%)
Other	3	9	5	4	21 (5%)	0	0	1	0	1 (3%)
Total	18	101	119	153	391	2	7	17	10	36

Figure 3.8

Australian States

Cause of Death by Age Group 2013

		Age Groups				Total
		0-14	15-34	35-54	>=55	
Queensland	CVA	1	4	15	15	35
	Trauma (road)	1	7	1	1	10
	Trauma (non-road)	0	0	2	4	6
	Hypoxia-Anoxia	3	11	6	1	21
	Other	0	3	1	1	5
	Total	5	25	25	22	77
New South Wales	CVA	1	1	16	23	41
	Trauma (road)	2	7	5	2	16
	Trauma (non-road)	0	5	4	6	15
	Hypoxia-Anoxia	0	12	6	7	25
	Other	1	0	3	1	5
	Total	4	25	34	39	102
Australian Capital Territory (ACT)	CVA	0	0	1	2	3
	Trauma (road)	0	1	0	0	1
	Trauma (non-road)	0	0	0	1	1
	Hypoxia-Anoxia	0	0	1	0	1
	Other	0	0	0	0	0
	Total	0	1	2	3	6
Victoria	CVA	0	2	15	38	55
	Trauma (road)	0	1	1	2	4
	Trauma (non-road)	0	2	1	5	8
	Hypoxia-Anoxia	3	10	12	12	37
	Other	0	3	1	2	6
	Total	3	18	30	59	110
Tasmania	CVA	0	0	1	3	4
	Trauma (road)	0	0	0	0	0
	Trauma (non-road)	0	2	0	0	2
	Hypoxia-Anoxia	0	1	0	0	1
	Other	0	0	1	0	1
	Total	0	3	2	3	8
South Australia	CVA	0	2	2	14	18
	Trauma (road)	0	2	1	1	4
	Trauma (non-road)	0	4	0	1	5
	Hypoxia-Anoxia	0	2	1	2	5
	Other	0	2	0	0	2
	Total	0	12	4	18	34
Northern Territory	CVA	0	1	2	0	3
	Trauma (road)	0	1	0	0	1
	Trauma (non-road)	0	0	1	0	1
	Hypoxia-Anoxia	0	0	1	0	1
	Other	0	1	0	0	1
	Total	0	3	4	0	7
Western Australia	CVA	0	1	12	6	19
	Trauma (road)	1	5	2	1	9
	Trauma (non-road)	0	3	0	1	4
	Hypoxia-Anoxia	3	5	3	1	12
	Other	2	0	1	0	3
	Total	6	14	18	9	47

CARDIOPULMONARY RESUSCITATION

Cardiopulmonary resuscitation is recorded for events leading up to the admission and hospital stay for the patient, prior to organ donation (Figures 3.9 and 3.10).

Figure 3.9

Cardiopulmonary Resuscitation 2009 - 2013

	Australia					New Zealand				
	2009	**2010**	**2011**	**2012**	**2013**	**2009**	**2010**	**2011**	**2012**	**2013**
Yes	89	112	111	130	155	13	15	13	14	8
No	158	197	226	224	234	30	26	25	24	27
Unknown	0	0	0	0	2	0	0	0	0	1
Total	247	309	337	354	391	43	41	38	38	36

Figure 3.10

Australian States Cardiopulmonary Resuscitation by State 2013 (2012)

	QLD	**NSW**	**ACT**	**VIC**	**TAS**	**SA**	**NT**	**WA**
Yes	31 (27)	42 (32)	1 (2)	47 (38)	3 (3)	7 (10)	4 (3)	20 (15)
No	46 (51)	59 (56)	5 (10)	63 (54)	5 (12)	27 (19)	3 (5)	26 (17)
Unknown	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (0)
Total	77 (78)	101 (88)	6 (12)	110 (92)	8 (15)	34 (29)	7 (8)	47 (32)

Pathway of Organ Donation

Authority Sought for Organ Donation

The predominant group requesting authority for organ donation in 2013 were the Intensive Care Clinicians and Registrars, 65% in Australia and 78% in New Zealand shown in Figure 3.11.

In Australia, authority for organ donation was sought by donor coordinators on 21 occasions, which is a marked increase from previous years (Figure 3.11). Authority for organ donation in New Zealand was sought by a donor coordinator in only one case.

See Figure 3.12 for individual State and Territory statistics.

In 2013, 25% of families volunteered authority for organ donation in Australia, down 6%, compared to 31% in 2012 (Figure 3.11).

In New Zealand, 14% volunteered authority in 2013 compared to 5% in 2012 and 13% in 2011.

Figure 3.11

Authority to Donate 2009 - 2013

	Australia					New Zealand				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
ICU Clinician	147	200	179	214	241	31	29	30	33	28
ICU Registrar	4	13	18	15	13	2	1	1	1	0
Emergency Consultant/Registrar	2	9	14	7	8	0	0	0	0	0
Other Physicians/Anaesthetist	0	0	1	2	1	2	1	2	2	2
Donor Coordinator	2	2	1	1	21	0	0	0	0	1
Volunteered by Family	90	82	123	110	99	7	9	5	2	5
Drivers Licence - No Family	0	0	0	1	0	0	0	0	0	0
Nursing Staff - Social Worker	2	2	1	4	2	1	1	0	0	0
Accident and Emergency Staff	0	0	0	0	0	0	0	0	0	0
Unknown	0	1	0	0	0	0	0	0	0	0
Total	**247**	**309**	**337**	**354**	**391**	**43**	**41**	**38**	**38**	**36**

Figure 3.12

Authority to Donate by State 2013 (2012)

	QLD	NSW	ACT	VIC	TAS	SA	NT	WA
ICU Clinician	41 (41)	76 (69)	4 (7)	61 (41)	3 (9)	28 (20)	7 (8)	21 (19)
ICU Registrar	0 (2)	2 (2)	0 (0)	5 (6)	0 (0)	1 (2)	0 (0)	5 (3)
Emergency Consultant/Registrar	1 (0)	3 (2)	0 (0)	2 (4)	0 (0)	0 (0)	0 (0)	2 (1)
Other Physicians/Anaesthetist	0 (0)	1 (0)	0 (0)	0 (2)	0 (0)	0 (0)	0 (0)	0 (0)
Donor Coordinator	3 (0)	15 (0)	1 (0)	0 (0)	0 (0)	1 (0)	0 (0)	1 (1)
Volunteered by Family	31 (35)	4 (14)	0 (4)	42 (37)	3 (6)	3 (7)	0 (0)	16 (7)
Drivers Licence - No Family	0 (0)	0 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Nursing Staff - Social Worker	0 (0)	0 (0)	0 (1)	0 (2)	1 (0)	0 (0)	0 (0)	1 (1)
Accident and Emergency Staff	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Total	76 (78)	101 (88)	5 (12)	110 (92)	7 (15)	33 (29)	7 (8)	46 (32)

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 2013, as with previous years, the main reason donors do not proceed to organ donation was because the time to cardiac standstill for DCD was exceeded.

Figure 3.13 represents the number of non-proceeding 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 78 donors who did not proceed down the pathway of solid organ donation and reasons for this are described in Figure 3.14.

Figure 3.13

Actual vs Intended (Non - Proceeding) Donors 2013

	QLD	NSW	ACT	VIC	TAS	SA	NT	WA	AUS	NZ
Intended Donor	16 (17%)	20 (16%)	-	32 (23%)	1 (11%)	6 (15%)	-	3 (6%)	78 (17%)	2 (5%)
Actual Donor	77 (83%)	102 (84%)	6 (100%)	110 (77%)	8 (89%)	34 (85%)	7 (100%)	47 (94%)	391 (83%)	36 (95%)

Figure 3.14

Reasons Why Donation Did Not Proceed 2013

Australia and New Zealand	
Did not proceed to cardiac standstill (DCD donors)	23
Disease of organs diagnosed	22
No suitable recipients on waiting list	12
Medically unsuitable results	7
Extended ischaemic time	5
Consent withdrawn by donor family	3
Infection in donor	3
Malignancy in donor	3
Total Non-Proceeding Donors	78

Pathway of Organ Donation

Donation After Circulatory Death

Australia

The majority of organs are donated by donation after brain death (DBD) donors. After certification of brain death, the donor remains on the ventilator and the removal of organs may occur many hours later.

Donation after circulatory death (DCD) donors are defined as patients of 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 449 donors for Australia .

In 2013 there were 86 DCD donors; 35 in Victoria, 24 in Queensland, 15 in New South Wales, five in Western Australia, three in Tasmania and two each in South Australia and Northern Territory (Figure 3.15).

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

In 2013, the mean age for a DCD donor was 45.4 years and the age range was 1.3 years to 74.5 years.

Causes of death leading to donation after circulatory death in 2013 were CVA (26), hypoxia-anoxia (38), road trauma (9), other trauma (6) and other causes (7).

Of the 86 actual DCD donors in 2013 nine donors did not have any donated organs transplanted. All nine donors did, however, become tissue donors with corneas sent to the Tissue Bank for transplant.

There were 50 intended DCD donors during 2013; 23 did not proceed to cardiac standstill; 14 had disease of organs; four had extended ischaemic times; three had no suitable recipients; two were medically unsuitable, two had malignancy; one had consent withdrawal; and one had underlying infection.

New Zealand

There were 2 DCD donors in New Zealand in 2013 however no organs were utilised from these donors.

Figure 3.15

Donation After Circulatory Death by State/Country 2009 - 2013

YEAR	QLD	NSW	ACT	VIC	TAS	SA	NT	WA	AUST	NZ
2009	5	15	2	17	0	3	0	0	42	2
2010	13	24	3	24	0	5	0	0	69	1
2011	18	18	2	32	0	8	1	7	86	2
2012	16	19	2	30	0	4	1	5	77	0
2013	24	15	0	35	3	2	2	5	86	2

Time from Admission to Brain Death

Australia

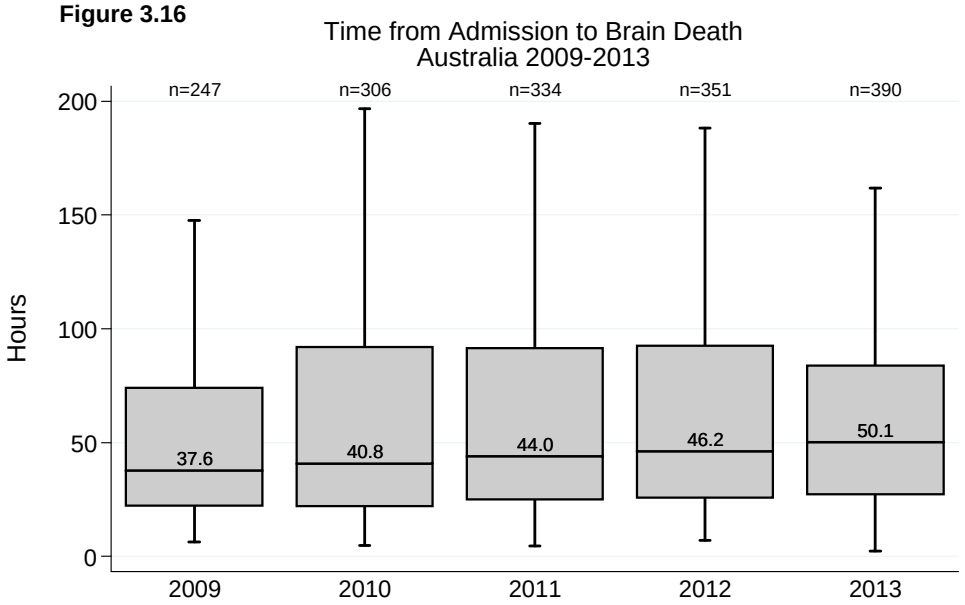
In 2013, 18% of Australian donors were declared brain dead within 23 hours of hospital admission.

Time of admission to hospital was unknown in only one donor.

The median time from admission to brain death was 50.1 hours.

Fifteen percent (60 donors) were in hospital for more than five days.

Figure 3.16



New Zealand

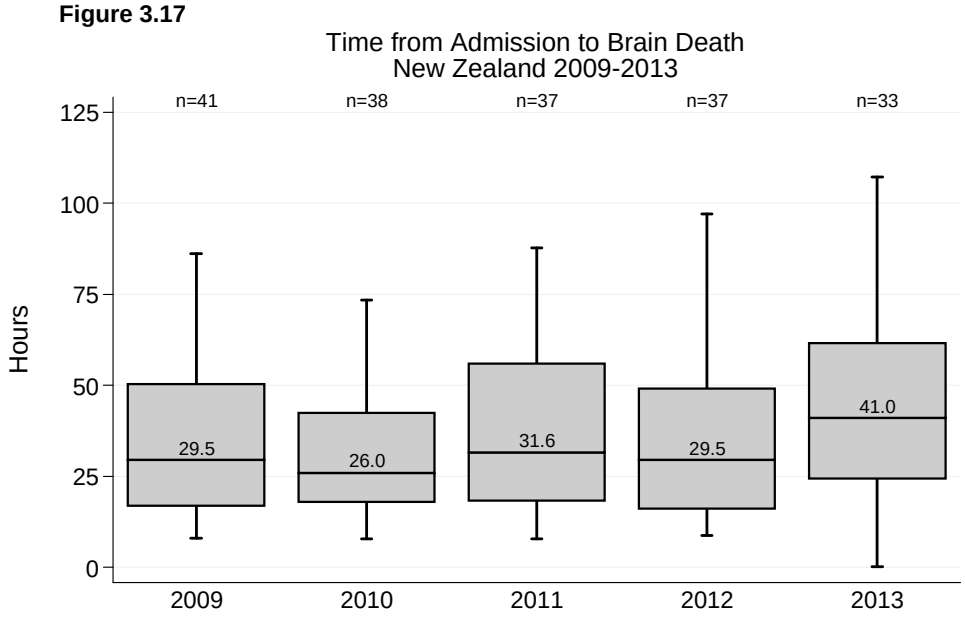
In 2013, 22% of New Zealand donors were declared brain dead within 23 hours of hospital admission.

Time of admission to hospital was unknown in three donors.

The median time from admission to brain death was 41.0 hours.

Eight percent (three donors) were in hospital for more than five days.

Figure 3.17



** For DCD donors, this is the time from admission to circulatory death*

*** Excluded from analysis are donors in Australia and New Zealand where no admission date was reported.*

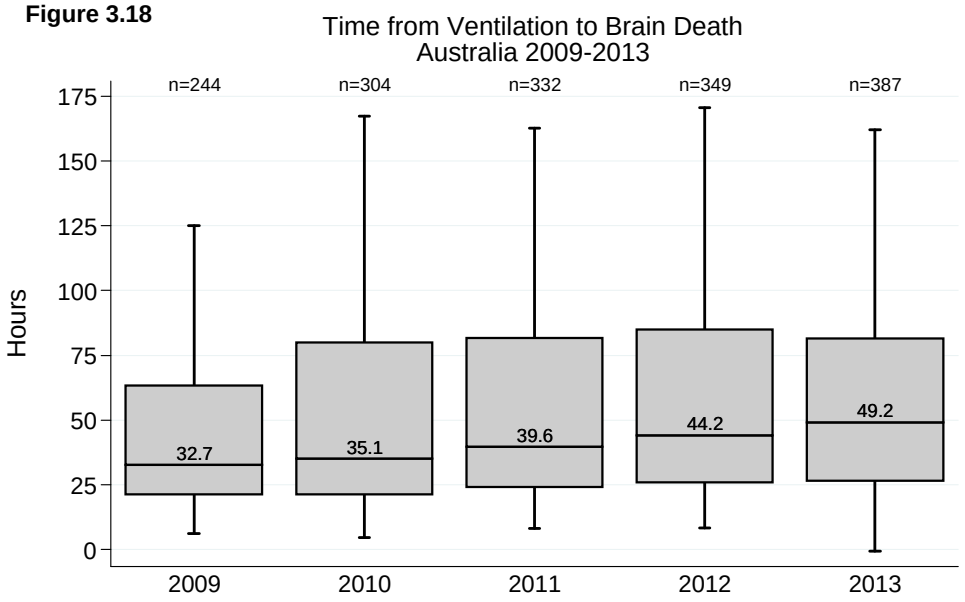
TIME FROM VENTILATION TO BRAIN DEATH

AUSTRALIA

In 2013, the median time from ventilation to brain death was 49.2 hours.

Time of ventilation was unknown in four Australian donors.

Figure 3.18

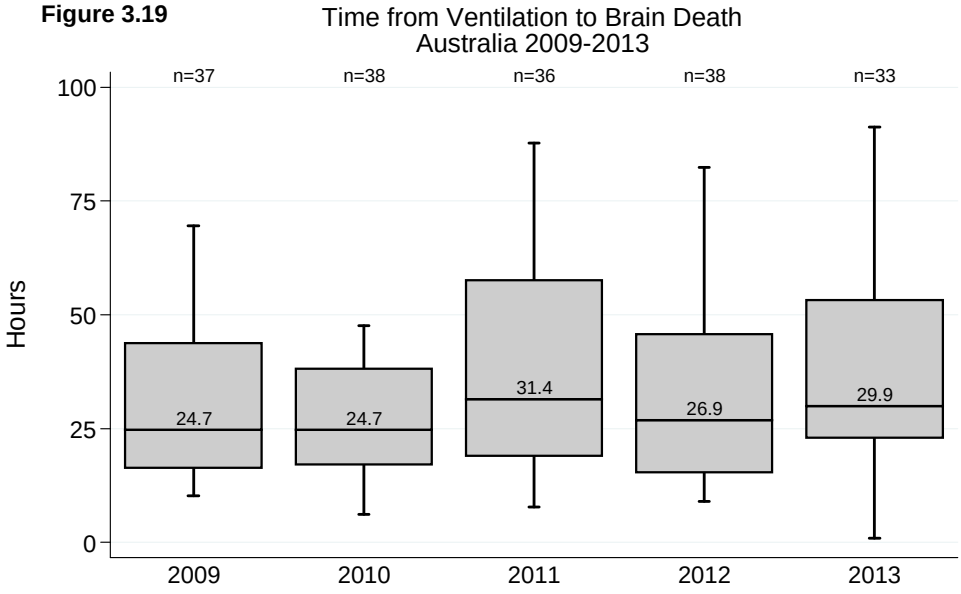


NEW ZEALAND

The median time in New Zealand from ventilation to brain death was 29.9 hours.

Time of ventilation was unknown in three New Zealand donors.

Figure 3.19



** For DCD donors, this is the time from ventilation to circulatory death*

*** Excluded from analysis were donors in Australia and New Zealand with no ventilation date reported.*

Time From Brain Death to Aortic Cross Clamp

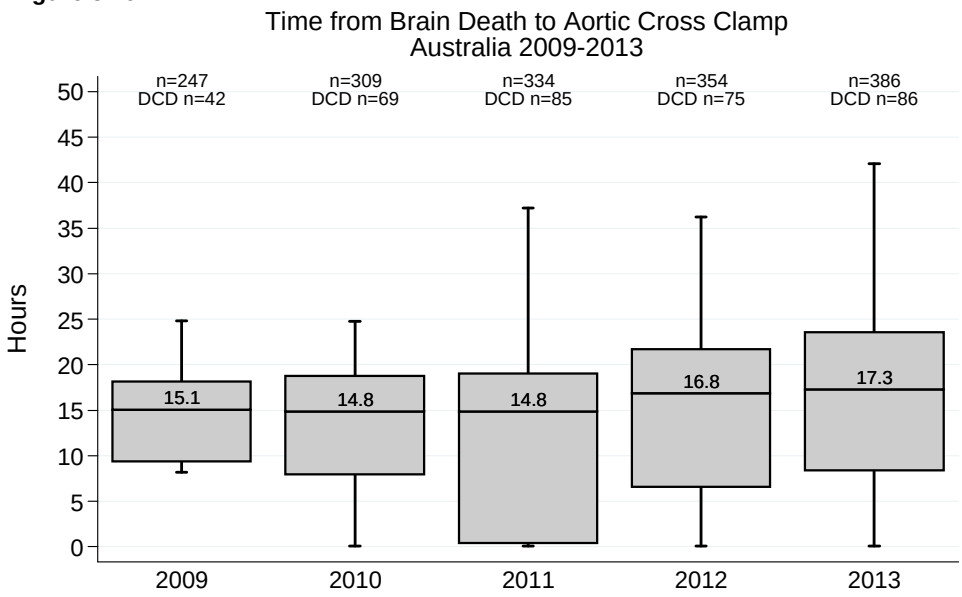
Australia

In 2013, 38 heart beating donors (12%) had undergone aortic cross clamp within twelve hours of the certification of brain death.

The median time was 17.3 hours.

Cross clamp of donor did not proceed in five Australian donors.

Figure 3.20

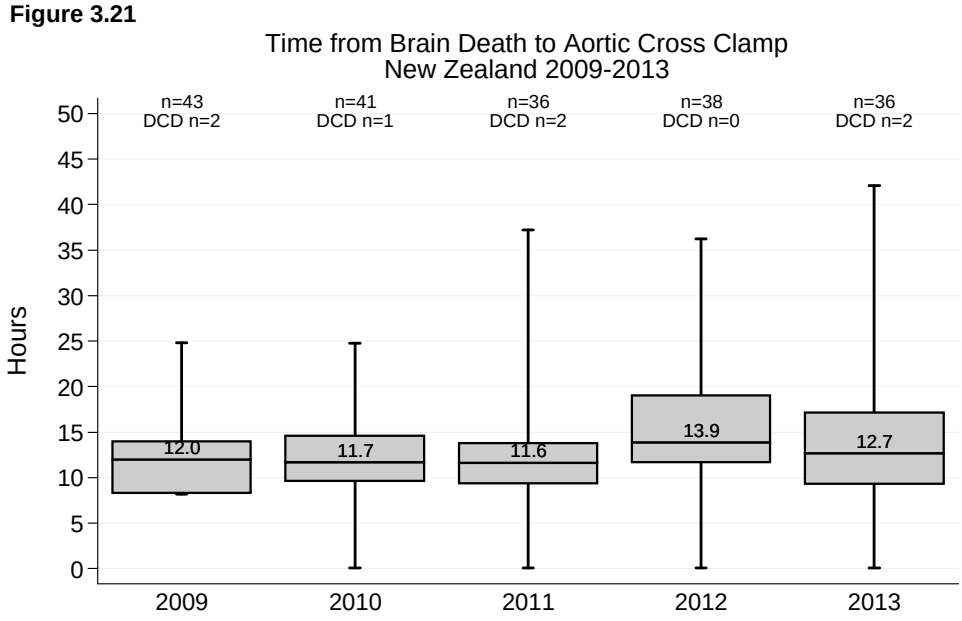


New Zealand

In 2013, 16 heart beating donors (47%) had undergone aortic cross clamp within twelve hours of the certification of brain death.

The median time was 13.0 hours.

Figure 3.21



** For DCD donors, this is the time from circulatory death to time of cold perfusion*

Pathway of Organ Donation

Donor Maintenance

Maintenance medication of the donor

(given in the intensive care/critical care unit)

Australia

There were 37 donors (9%) who did not require maintenance drug support in 2013.

Antidiuretic agents (desmopressin/ vasopressin) were prescribed to 59% (229) of all donors.

MAP <50 mm Hg

Mean arterial blood pressure (MAP) <50 mmHg was recorded in 5.4% (21) of donors in Australia in 2013. Five donors had a duration of less than one hour and 15 donors had one hour or longer (one donor had no reported duration of MAP <50mmHg). The range was 36 minutes to 5 hours.

New Zealand

In 2013 there was only one donor who did not require inotropic support.

Antidiuretic agents were prescribed to 64% (23) of all donors.

MAP <50 mmHg

One donor was reported with a mean arterial blood pressure (MAP) <50 mmHg with a duration of one hour.

Terminal Treatment

(medication provided in the operating theatre)

Australia

There were 58 donors who did not receive any heparin as part of their terminal treatment in 2013. Forty seven of those donors were DCD (donation after circulatory death) donors.

Forty five donors did not receive any terminal treatment; 40 of those were DCD donors.

New Zealand

There were two donors who did not receive any heparin and only one donor who did not receive any drugs as part of their terminal treatment in 2013. This was a heart beating donor.

Summary - Organs Requested, Consent Given, Retrieved and Transplanted

The information reported here, on request for organ donation, refers only to those patients who become actual or intended organ 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.

For further details see Supplement 1 - for Australia and Supplement 2 - for New Zealand.

Figure 3.22 shows the outcome of organs requested in 2013 (2012).

Figure 3.22

Outcome Following Request for Organ Donation by Organ Type 2013 (2012)

		Kidneys	Liver	Heart	Lungs	Pancreas	Stomach/ Intestines
Australia	Requested	760 (690)	360 (334)	270 (258)	690 (622)	299 (266)	57 (40)
	Consent Given	758 (688)	357 (329)	257 (247)	654 (610)	289 (258)	48 (35)
	Retrieved	691 (636)	243 (218)	92 (77)	337 (303)	68 (70)	0 (1)
	Recipients Transplanted	630 (607)	252 (230)	79 (76)	167 (144)	+34 (+42)	0 (1)
New Zealand	Requested	68 (74)	35 (37)	20 (30)	54 (66)	12 (22)	0 (0)
	Consent Given	68 (72)	35 (36)	19 (28)	54 (62)	12 (22)	0 (0)
	Retrieved	61 (57)	25 (30)	9 (12)	36 (28)	0 (3)	0 (0)
	Recipients Transplanted	55 (56)	26 (32)	9 (12)	18 (14)	0 (3)	0 (0)

Kidneys and lungs are counted as two separate organs (i.e. left and right)

+ Includes (1) 2013 and (4) 2012 pancreas islet transplants

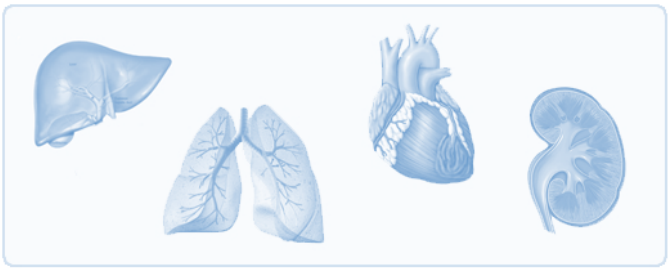
Organs Requested

The requests for specific organs in Australia in 2013 from 391 organ donors were: kidneys 97.2%, liver 92.1%, heart 69.1%, lungs 88.2% and pancreas 76.5%.

From the 36 New Zealand donors in 2013, the requests for specific organs were: kidneys 94.4%, liver 97.2%, heart 55.6%, lungs 75% and pancreas 33.3%.

Pathway of Organ Donation

Organs Retrieved



The organs retrieved in each donor state retrieval team are detailed in the Supplement 1 - Australia and Supplement 2 - New Zealand, at the end of this report.

Of all organs retrieved in Australia only 5% (70) were not used and 3% (43) went to research. Of those used for research the majority (26) were pancreas/pancreas islets. 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.

Multiple Organ Retrieval

There were 86 (22%) Australian donors in 2013 who had a single organ retrieved and transplanted, shown in Figure 3.23. Kidney only donation occurred in 67 cases.

Sixteen donors in Australia went to theatre, but no solid organs were retrieved.

New Zealand had nine (25%) single organ donors in 2013, four donating kidneys, three donating a liver and two donating lungs.

In Australia, 74% (289) of donors and 5% (27) of donors in New Zealand had two or more organs retrieved for the purpose of transplantation.

Figure 3.23

Multiple Organ Retrieval 2009 - 2013

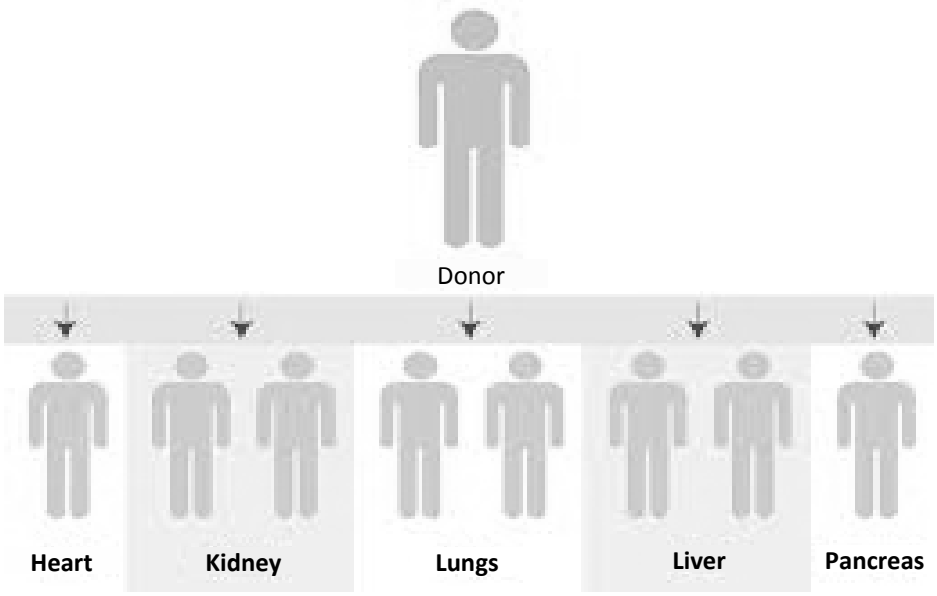
Number of Organs	Australia					New Zealand				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
No organs	7 (3%)	7 (2%)	8 (2%)	12 (3%)	16 (4%)	2 (5%)	3 (7%)	3 (8%)	4 (11%)	0 (0%)
Single	43 (17%)	60 (19%)	89 (26%)	87 (25%)	86 (22%)	7 (16%)	9 (22%)	4 (11%)	5 (13%)	9 (25%)
Two	55 (22%)	98 (32%)	97 (29%)	107 (30%)	120 (31%)	15 (35%)	12 (29%)	10 (26%)	12 (32%)	13 (36%)
Three	60 (24%)	61 (20%)	75 (22%)	76 (21%)	100 (26%)	14 (33%)	12 (29%)	16 (42%)	8 (21%)	8 (22%)
Four	47 (19%)	54 (17%)	45 (13%)	50 (14%)	50 (13%)	4 (9%)	5 (12%)	5 (13%)	9 (24%)	6 (17%)
Five	35 (14%)	29 (9%)	23 (7%)	22 (6%)	19 (5%)	1 (2%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)

Figure 3.24

Comparison of Multiple Organ Retrieval by State/Country 2013

Number Of Organs	QLD	NSW	ACT	VIC	TAS	SA	NT	WA	AUST	NZ
No organs	6 (8%)	7 (7%)	0 (0%)	3 (3%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	16 (4%)	0 (0%)
One	17 (22%)	25 (25%)	1 (17%)	26 (24%)	1 (13%)	5 (15%)	2 (29%)	9 (19%)	86 (22%)	9 (25%)
Two	26 (34%)	26 (25%)	2 (33%)	34 (31%)	3 (38%)	14 (41%)	2 (29%)	13 (28%)	120 (31%)	13 (36%)
Three	17 (22%)	21 (21%)	1 (17%)	32 (29%)	3 (38%)	6 (18%)	1 (14%)	19 (40%)	100 (26%)	8 (22%)
Four	9 (12%)	18 (18%)	0 (0%)	10 (9%)	1 (13%)	5 (15%)	2 (29%)	5 (11%)	50 (13%)	6 (17%)
Five	2 (3%)	5 (5%)	2 (33%)	5 (5%)	0 (0%)	4 (12%)	0 (0%)	1 (2%)	19 (5%)	0 (0%)

For the above donor counts, 2 kidneys = 1 organ, 2 lungs = 1 organ
On occasions when only one kidney or one lung is retrieved, this is also defined as one organ



One donor can benefit the lives of a number of recipients suffering end stage organ disease.