



Organ Donation New Zealand
New Zealand's official donor agency

ANNUAL REPORT 2016



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Organ Donation New Zealand

Organ Donation New Zealand (ODNZ) is the national service for deceased organ and tissue donation. It is managed through the Auckland District Health Board and has offices at the Greenlane Clinical Centre in Auckland.

ODNZ co-ordinates all organ and some tissue donation from deceased donors in New Zealand and the donor co-ordinators provide information and ongoing support for those families who have generously donated organs or tissues.

ODNZ works with health professionals in donor hospitals to ensure that processes for deceased donation are nationally consistent and of the highest medical, ethical and legal standards.

The Guiding Principles of ODNZ are:

1. Every opportunity for deceased organ donation should be recognised by Intensive Care Unit (ICU) staff and every family should have donation discussed with them by a health care professional with compassion, respect and appropriate knowledge and skill. Donation should be discussed with all families irrespective of whether the word 'donor' is on the driver licence.
2. The process of organ donation must accord with good medical practice, ethical standards, and the law. The Human Tissue Act (2008) requires consent before organs or tissue may be removed from a deceased person for transplantation.
3. The family's decision about donation should always be respected. All donors come out of human tragedy and donation by the family is voluntary.

ODNZ provides education for health professionals, supplies information to the media and responds to public enquiries.

About this report

This report outlines the activities of ODNZ and includes an authoritative account of organ donation and transplantation activity in New Zealand during 2016.

It is intended to be a valuable source of information for health professionals involved in organ and tissue donation and transplantation; and for the general community.

For their assistance with information in this report we gratefully acknowledge Helen Twohill from the New Zealand National Eye Bank; Jill Faulkner from the New Zealand Heart Valve Laboratory; Vladimir Slyshkov from the New Zealand Skin Bank; Denise Reddy from the New Zealand Heart and Lung Transplant Service; Fionna Burgess from the New Zealand Liver Transplant Unit; Tricia Casey, Sheryl Sparkes and Susie Rich from the Renal Transplant Units.

From our Clinical Director

Organ Donation New Zealand (ODNZ) sincerely thanks the families who generously agreed to organ and tissue donation in 2016.

ODNZ reported 61 deceased organ donors in 2016 compared with 53 in 2015, 46 in 2014 and 36 in 2013. Of the 61 donors, 55 donated after brain death (DBD, where the brain is dead but the heart has not yet stopped) and 6 donated after circulatory death (DCD, after the heart has stopped). ODNZ attributes this increase in donors to the ongoing quality improvement programme in the 24 public hospital ICUs. It is based on an audit of all ICU deaths. The progressive increase in the number of donors over the last four years has occurred from within a similar number of patients dying with severe brain damage and with similar rates of family agreement to donation. We believe that it represents the effects of increased awareness by ICU staff of the potential opportunity for donation followed by increased consultation with ODNZ.

At 11.7 donors per million population (pmp) for 2016, the New Zealand DBD rate is now more similar to the rates of Australia (15.5) and the UK (12). In comparison, New Zealand's DCD rate at 1.3 donors pmp is substantially lower than that of Australia (5.3) and the UK (8.9). The reasons for these differences in rates of DCD donation are likely to be multifactorial including donor acceptability criteria and differences in end-of-life practices.

Criteria and protocols for DCD are being updated. DCD can now be considered for any diagnosis where therapy is to be withdrawn and not limited to devastating brain injury; lungs (as well as liver and kidneys) will be able to be retrieved for transplantation; the age limit has increased from 60 to 70; and the time interval between withdrawal of therapy and death is being increased from 60 to 90 minutes for lungs and kidneys only. ICUs credentialed for DCD are being increased from eight to 13 with the addition of Hawke's Bay, CVICU, North Shore, Tauranga and Whangarei.

There were 61 tissue-only donors (eyes, heart valves, skin) co-ordinated by ODNZ in 2016, compared with 53 in 2015, 48 in 2014 and 57 in 2013.

We thank the Link Team members and other health professionals at donor hospitals for their continued commitment to organ and tissue donation. We appreciate the support and encouragement we receive from the intensive care community, the ODNZ Advisory Committee, our colleagues in transplantation and in the tissue banks, the Ministry of Health, the Australian and New Zealand Intensive Care Society (ANZICS) and the Australian Government Organ and Tissue Authority.

Personally, I would like to sincerely thank my ODNZ colleagues for their support, commitment, resourcefulness and hard work in 2016.



Stephen Streat FRACP
Clinical Director, ODNZ

ORGAN DONATION NEW ZEALAND

Staffing

Janice Langlands (Team Leader), Mary O'Donnell, Lauren Sprenger, Sue Garland and Annette Flanagan (who commenced in February 2016), are the ODNZ donor co-ordinators. They provide a 24-hour consultation, advice and support service to health professionals involved in organ and tissue donation.

Drs Stephen Streat (Clinical Director), James Judson and Emma Merry are the ODNZ medical specialists. They provide a 24-hour support and advice service for the donor co-ordinators and health professionals on all aspects of the donation process.

In March Rebecca Oliver commenced as the ODNZ communications advisor. She is responsible for providing information to health professionals and the public. In November Margaret Kent resigned after eight years as team administrator. Leeny Gin will take up this position in February 2017.

Link Teams

The Link teams in all donor hospitals consist of ICU Link nurses, operating theatre (OT) Link nurses and ICU Link doctors. They are the local experts and liaison for organ and tissue donation for their hospital.

Additional Ministry of Health funding has enabled ODNZ to expand the ICU Link nurse role into one with more formal responsibility for promoting and facilitating organ and tissue-only donation within the ICU. So far, this expanded role has commenced in Christchurch, Middlemore, Waikato and Wellington ICUs and DCCM at Auckland City Hospital.

The ODNZ Advisory Committee

The Advisory Committee comprises representatives from intensive care medicine and nursing, organ and tissue transplantation, Maori health, Pacific health, and a consumer representative. The committee provides oversight and guidance for ODNZ and last met with ODNZ in March 2016. Further meetings have been suspended pending the outcome of the current Ministerial review of organ donation.

ODNZ ACTIVITIES

Donor Family Support

The donor co-ordinators provide information and support for donor families both before and after the organ and tissue donation. This includes the offer of hand prints and locks of hair from their relative, providing general information about the outcome of their donation and facilitating anonymous communication between recipients and donor families and vice versa.

Thanksgiving Services are held annually and respectfully acknowledge the generosity of families who have donated organs and tissues following the death of a family member. Families of donors, recipients and their families, and health professionals involved in both organ donation and transplantation are invited to these services. Services were held in May with around 500 people attending at the Holy Trinity Cathedral in Auckland and around 300 at the Transitional Cathedral in Christchurch.

EDUCATION

Core Family Donor Conversation Workshop (cFDC)

A cFDC Workshop was held in Auckland on 4 and 5 August 2016. This is a two-day workshop developed by the Australian Government Organ and Tissue Authority and provides training for health professionals working in organ and tissue donation. The workshops aim to increase knowledge, understanding and skills in having conversations with potential donor families. The workshop was facilitated by Australians Dr Steve Philpott and Bernie Dwyer and was attended by 14 ICU nurses and 12 ICU doctors.

Lauren Sprenger, Sue Garland and Annette Flanagan, ODNZ donor co-ordinators, participated; Dr Emma Merry and Dr James Judson, ODNZ medical specialists, attended to represent ODNZ.

The workshop was very successful and, once again, evaluation feedback was overwhelmingly positive. ODNZ plans to hold another cFDC workshop in August 2017 and strongly recommends attendance to all specialists and trainees who work in ICU, and all Link nurses and other health professionals involved in donation.

DCD Implementation

DCD protocols were updated to incorporate the changes outlined (page 4) in Auckland City (DCCM, Level 8 OT and Starship Children's Hospital), Middlemore, Wellington, Christchurch and Dunedin Hospitals. Education was provided to ICU medical and nursing staff; OT nursing staff; anaesthetic technicians and anaesthetists.

A DCD protocol was developed for Hawke's Bay Hospital. Relevant education sessions were held in the ICU and OT, and Hawke's Bay is now credentialed for DCD.

Link Nurse Workshop

The ICU and OT Link nurses attended a two-day workshop in Auckland on 3 and 4 November.

The focus of the first day was pancreas transplantation and included expert speakers in diabetes and pancreas transplantation. A recipient of a combined kidney-pancreas transplant shared her personal story which finished the day

on a positive note. Ms Doris Fong, social worker, Auckland City Hospital gave a very enlightening presentation on death and dying in the Chinese culture. On the second day of the workshop the programme for the OT Link nurses included speakers on brain death and the ICU processes, DCD and lung donation and support for OT staff involved in organ donation. The ICU Link nurses attended the ODNZ Audit meeting along with their medical colleagues.

ODNZ ICU Audit

Audit meetings were held in Auckland in April and November and were attended by ICU Link nurses and doctors. ODNZ sincerely thanks the ICU Link nurses who continue to collect and enter data for this Audit.

Together with the donor co-ordinators, Dr James Judson continued to visit hospitals and ICUs throughout New Zealand to promote organ and tissue donation and to provide feedback on their own data. Sites visited were: Wairau, Hawke's Bay, Nelson, Christchurch, Waikato, Wellington, Rotorua, Whangarei and DCCM at Auckland City Hospital.

In 2017, the audit database will need to be changed to encompass changes to DCD criteria, and separate dominators will be devised for DBD and DCD. The audit filter system has already been changed in anticipation.

Expanded ICU Link Nurse Study Days

The expanded ICU Link nurses met in Auckland (March) and Wellington (December).

These days provided opportunities for the expanded Link nurses to share knowledge and resources and to assist with the development of this role.

Associate Professor Tracy Long-Sutehall from the UK met with the expanded Link nurses in November and shared her expertise as a transplant nurse, transplant psychologist, and researcher investigating issues of death and dying, end-of-life decision making, and organ and tissue donation.

Study Days and Health Professional Education

In 2016 education (full days, half days or educational sessions) for health professionals was held in the following hospitals: Middlemore; Rotorua; Hawke's Bay (2); Wellington; Nelson; Christchurch (2); and Dunedin.

This education provided nursing staff from ICUs and OTs, and other health professionals involved in donation and transplantation with information about the process of organ and tissue donation.

Dr Emma Merry and Mary O'Donnell along with Jo Farrell, ICU Link nurse and Dr Jo Ritchie, ICU Link doctor, facilitated a "difficult conversations" workshop for Middlemore Hospital ICU nursing staff. Feedback from the participants was very positive.

Drs Streat, Judson and Merry gave presentations about organ donation at Medical Grand Rounds in Hawke's Bay, Masterton, Nelson, Rotorua, Tauranga, Wairau and Whangarei Hospitals.

Other education sessions were provided by the donor co-ordinators for health professionals at hospital wards and hospices, and for nursing students and postgraduate nurses at educational institutes and universities.

ODNZ News

A newsletter providing information for staff in donor hospitals was produced by ODNZ in June. The newsletter featured information about organ and tissue donation and transplantation, including stories from a lung recipient and the recipient of a corneal graft.

Public Awareness

ODNZ responded to public enquiries from the 24-hour 0800 number (0800 4DONOR) and from the website (www.donor.co.nz).

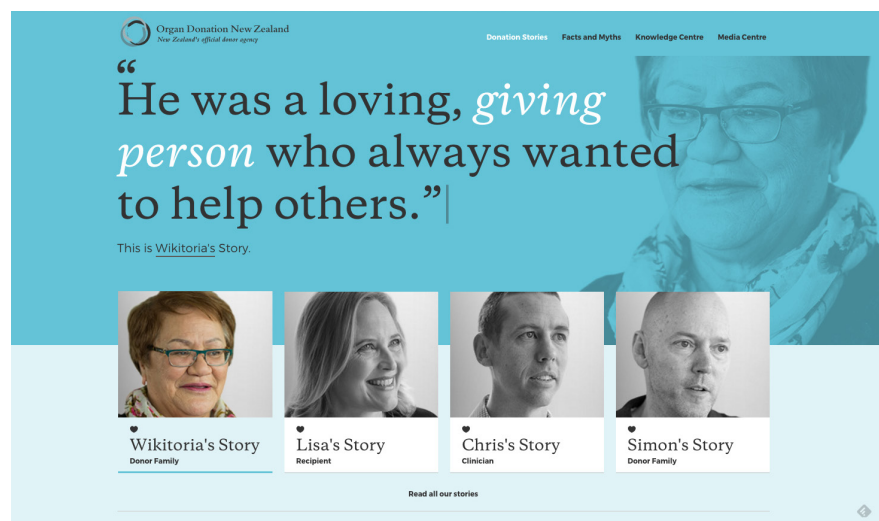
ODNZ Website

The ODNZ public website www.donor.co.nz has been redeveloped. The website features stories from donor families, recipients and health professionals, and encourages families to have the conversation about organ donation.



Organ Donation New Zealand

In New Zealand, there are currently more than 550 people waiting for an organ or tissue transplant. Sadly, some of those people will die waiting, while others will continue to lead lives restricted by long-term treatment. Donation makes a difference. It offers valuable second chances and dramatically changes lives. If there were more donors, many more people could benefit from life-saving transplants. Our website is designed to provide you with accurate information on deceased organ and tissue donation and



ATTENDANCE AT CONFERENCES AND MEETINGS

ANZICS Regional Meeting, Rotorua, 30 March

Dr Emma Merry attended this meeting where the increasing challenge of providing complex, patient-centred care with diminishing resource was the subject of much debate.

Ethical, Legal & Psychosocial Aspects of Transplantation (ELPAT) Congress, Rome, 22–25 April

Dr James Judson attended this small eclectic conference attended by people from many disciplines from throughout the world. He thought it was one of the best conferences he has attended in many years. It is run by the European Society of Organ Transplantation but unfortunately it is not held every year.

Interesting topics covered included organ trafficking, use of social media, incentives /disincentives /inducements /coercion in organ donation, donation after euthanasia, the Israel organ donation register system, variation in DCD practices around the world and ethical exploration of the determination of death

Donor Surgeons, Donor Co-ordinators Advisory Committee Meeting, Sydney, 6 December

Lauren Sprenger attended this meeting as the representative for the New Zealand Donor Co-ordinators. This Advisory Committee addresses procedures involved in organ retrieval.

Understanding Death in Critical Care: A Nursing Symposium, Wellington, 8 December

Dr Emma Merry presented at this symposium which included a wide range of clinical, research and medico-legal perspectives as well as an energetic panel discussion.

ORGAN AND TISSUE DONATION

In 2016, 61 deceased donors from ICUs in 12 donor hospitals donated organs (and tissues) for transplantation, a 15% increase from 2015. Of these, 55 donated following brain death and six donated following circulatory death (DCD).

This does not include tissue-only donors (eyes, heart valves and skin).

Table 1:
Number of deceased organ donors in New Zealand

Hospital	2012	2013	2014	2015	2016
Auckland City CVICU	0	1	0	0	0
Auckland City DCCM	6	9	6[1]	6[1]	7[2]
Christchurch	7	7	7	8	11[1]
Dunedin	3	1	4	5	11[1]
Gisborne	0	0	1	1	0
Grey Base	0	0	0	0	0
Hawke's Bay	3	2	3	2	3
Hutt	1	1	0	0	0
Middlemore	4	3	3[1]	3[2]	2[1]
Nelson	1	0	0	2	3
North Shore	1	0	1	1	0
Palmerston North	2	0	2	0	0
Rotorua	0	1	1	0	0
Southland	1	1	1	3	1
Starship Children's	0	1[1]	1	0	0
Taranaki Base	0	0	0	1	0
Tauranga	0	0	0	0	3
Timaru	2	0	0	0	0
Waikato	0	5	3[1]	8[1]	6[1]
Wairau	0	0	0	0	0
Whanganui	0	0	1	0	2
Wellington	6	4[1]	10[3]	12[1]	11
Whakatane	0	0	1	0	0
Whangarei	1	0	1	1	1
Total number of donors	38	36[2]	46[6]	53[5]	61[6]

Note: [] DCD donors

Table 2:
Cause of Donor
Death by Year

	2012	2013	2014	2015	2016
Intracranial haemorrhage	13	25	15	24	30
Cerebral infarct	1	1	5	2	6
Trauma (road)	4	1	7	5	6
Trauma (other)	8	2	10	6	2
Hypoxia-anoxia	7	6	8	15	15
Other	5	1	1	1	2
Total	38	36	46	53	61

Table 3:
Age of Deceased
Donors By Year

	2012	2013	2014	2015	2016
Mean	47.2	47.3	49.7	44.8	48.1
Median	49.2	51.4	45.6	47.0	52.7
Minimum	14.9	1.8	0.2	5.0	17.7
Maximum	76	81.5	82.5	79.0	80.0

Table 4:
Ethnicity of Deceased
Donors by Year

	2012	2013	2014	2015	2016
European	28	29	37	46	47
Maori	6	3	4	5	5
Pacific People	1	0	2	0	1
Other	3	4	3	2	8
Total	38	36	46	53	61

Table 5:
Organs and Tissues Retrieved from Deceased Donors and Transplanted

	2012	2013	2014	2015	2016
Kidneys	56	61	67	73	95
Hearts	12	9	17	12	11
Lungs (pairs)	12	19	20	25	20
Livers	29	24	32	41	51
Pancreas	2	1	2	3	4
Eye tissue	14	17	23	26	28
Heart valve tissue	9	14	8	17	20
Skin	2	3	3	3	2

Table 6:
Organs from New Zealand Deceased Donors Transplanted in Australia

In 2016 some organs from New Zealand donors were transplanted to Australian recipients and vice versa in accord with the Transplantation Society of Australia and New Zealand (TSANZ) *Clinical Guidelines for Organ Transplantation from Deceased Donors, Version 1.0 – April 2016*, which is available on their website: www.tsanz.com.au

	2012	2013	2014	2015	2016
Liver	5 [3]	5 [4]	4[3]	5[3]	7[1]
Heart	0	0	1	1	0
Lungs	1	0	3	2	3
Kidney	0	0	0	0	0

[] Split livers

Table 7:
Organs from Australian Deceased Donors Transplanted in New Zealand

	2012	2013	2014	2015	2016
Liver	8 [1]	5 [3]	7	4[1]	8
Heart	0	0	1	1	0
Lungs	0	0	0	0	0
Kidney	0	0	0	0	0

[] Split livers

Table 8:
Summary data from
ODNZ ICU Audit
database

All deaths in ICU	2012	2013	2014	2015	2016
All deaths	1198	1202	1243	1158	1143*
Ventilated while in ICU	926	906	954	848	896
Ventilated in ICU with severe brain damage	377	371	412	320	371
Of deaths ventilated in ICU with severe brain damage					
Discussed with ODNZ	88	103	113	135	158
Organ donation mentioned at any time (including by family)	119	129	149	165	170
Organ donation formally discussed with family by health professionals	85	91	116	141	153
Possibly brain dead (fixed dilated pupils and no apparent brain reflexes just prior to death)	116	116	153	162	138
Of the possibly brain dead					
Number who were tested for brain death (defined as "either one or two tests")	66	70	91	109	101
Number of those tested who were determined to be brain dead	63	66	88	105	90
Number of those determined to be brain dead in whom the family agreed to donation	41	36	41	48	57

* Provisional uncorrected data as available at time of printing

Table 9:
Summary data
from ODNZ Referral
database

Data from ODNZ records	2012	2013	2014	2015	2016
Telephone discussions about potential organ donation	108	122	128	136	168
Brain dead donors	38	34	40	48	55
DCD donors	0	2	6	5	6
Total donors	38	36	46	53	61

The number of referrals to ODNZ in 2016 increased by 25% over 2015, continuing the trend of previous increases since 2011. It includes some cases who do not appear in the ICU death audit because, for example, they might have died without ever having been admitted to ICU, or might not have died in ICU.

ORGAN TRANSPLANTATION IN NEW ZEALAND

Organ transplantation in New Zealand includes:

- Kidney transplantation (deceased-donor and live-donor) transplantation, at Auckland City, Starship Children's, Wellington and Christchurch Hospitals.
- Liver transplantation (deceased-donor and live-donor) at Auckland City and Starship Children's Hospitals.
- Heart transplantation at Auckland City and Starship Children's Hospitals
- Lung transplantation at Auckland City and Starship Children's Hospitals
- Pancreas transplantation at Auckland City Hospital.

A record number of kidney and liver transplants and New Zealand's first combined liver and lung transplant were performed in 2016. Data in Tables 10-14 include all transplants performed in New Zealand (including organs from Australian deceased donors). See Tables 6 and 7 for details of Trans-Tasman organ sharing.

Table 10:
Kidney Transplantation
by Year and Donor Type

	2012	2013	2014	2015	2016
Recipients, deceased-donor, single kidney	55	52	65	73	85
Recipients, deceased-donor, double kidney	0	3	1	0	5
Live-donor	54	58	72	74	82
Total	109	113	138	149	172

Table 11:
Heart and Lung
Transplantation by Year

	2012	2013	2014	2015	2016
Heart	12	9	17	12	11
Lung	12	19	17	23	17

Table 12:
Liver Transplantation
by Year

	2012	2013	2014	2015	2016
Adult, deceased donor	26	25	31	36	46
Adult, live adult donor	0	0	0	0	2[1]
Child, deceased donor	8	6	7	9	10
Child, live adult donor	3	3	5	3	1
Total	37	34	43	48	59

Note: [1] Domino transplant

Table 13
Pancreas
Transplantation
by Year

	2012	2013	2014	2015	2016
Pancreas	3	0	2	3	4

Table 14
Multiple Organ
Transplants by Year

This table does not include the number of recipients of two kidneys.

	2012	2013	2014	2015	2016
Kidney and pancreas	3	0	2	2	4
Liver and kidney	0	0	2	2	1
Liver and pancreas	0	0	0	1	0
Heart and liver	0	0	1	0	1
Heart and kidney	0	0	0	0	1
Lung and liver	0	0	0	0	1
Total number of multiple transplants	3	0	5	5	8

DECEASED TISSUE DONATION

In 2016 there were 61 deceased tissue-only donors facilitated by ODNZ. Tissue donation can include skin, eye and heart valve tissue.

Table 15
Deceased Tissue-Only
Donation facilitated
by ODNZ

Referred from:	Ward/Unit	Tissue (only) donors
Auckland City Hospital	CVICU	7
	DCCM	8
	ED	1
	Wards 63, 64, 68, 78, 83	6
Christchurch Hospital	ICU	1
Hawke's Bay Hospital	Duty Manager	1
Nelson Hospital	ICU	3
Waikato Hospital	ICU	5
Wellington Hospital	ICU	6
	Ward 5 South	1
Whangarei Hospital	Ward 16	2
Mary Potter Hospice, Wellington		2
Mercy Hospice, Auckland		3
North Haven Hospice, Whangarei		3
North Shore Hospice, Auckland		2
Parkhaven Hospital, Auckland		1
Other: Family referrals		2
Coronial and Mortuary Services		7

Deceased tissue-only donation is also facilitated by:

- The corneal co-ordinators from the New Zealand National Eye Bank facilitate eye-only donation referred directly to their service. The corneal co-ordinators also facilitate eye donation referred from the Bereavement Team at Middlemore Hospital.
- The heart and lung transplant team co-ordinate heart valve donation from the explanted hearts from heart transplant recipients.

Table 16:
**Total Deceased
Tissue Donation
in New Zealand**

Number of donors	2012	2013	2014	2015	2016
Skin	13	29	13	8	10
Heart Valves	36	29	34	30	32
Eyes	167	173	174	172	144

www.donor.co.nz