

SUMMARY - AUSTRALIA

1. In 2000 there were: 196 donors (10 dpmp) with 350 kidneys, 142 livers, 59 hearts, 155 lungs and 26 pancreas transplanted into recipients.
2. In 2000 the highest donor rate was in South Australia (20 dpmp) and the Australian Capital Territory (16 dpmp), the lowest was in Tasmania (2 dpmp).
3. The mean age of donors in 2000 was 41.1 years, with an age range of 0.4 - 77.9 years. The male to female ratio is 3:2 over the reporting years, 1989-2000.
4. In 2000, 53% of donors with a known occupation were classified as student, blue collar worker and retirees. The majority of donors were Caucasoid and their religion was recorded as Christian.
5. In 2000, the major cause of death in 52% of donors was cerebrovascular accident (CVA). Road trauma caused 21% of all deaths.
6. In 2000, consent for organ donation was sought in 57% of cases by the Intensive Care Unit Clinician, volunteered by the family in 19% of cases and sought by the Donor Coordinator in 22% of cases. Coronial inquiries were required in 47% of all donors in 2000.
7. The consent rates for specific organs were: kidneys 100%, liver 99%, heart 95%, lungs 94% and pancreas 92%.
8. The donation of more than one organ occurred in 79% of donors in 2000.
9. In 2000, from donors where organs had been retrieved, 95% of kidneys, 97% of livers, 92% of hearts, 96% of lungs and 76% of pancreas were actually transplanted.
10. The average number of organs transplanted from each donor was 3.35.

SUMMARY - NEW ZEALAND

1. In 2000 there were: 41 donors (11 dpmp), which resulted in 75 kidneys, 34 livers, 13 hearts, 26 lungs and 3 pancreas being transplanted into recipients.
2. The mean age of donors was 39.7 years in 2000, with an age range of 5.5 - 68.5 years. The male to female ratio is 3:2 over the last eight years.
3. The major cause of death in 2000 was cerebrovascular accident in 59%, followed by road trauma in 15%.
4. In 2000, 41% of donors with a known occupation were classified as student and white collar worker. The majority of donors were Caucasoid and their religion was recorded as Christian.
5. Consent for organ donation was sought in 85% of cases in 2000 by the Intensive Care Unit Clinician. There were two cases whereby consent was volunteered by the family. Coronial inquiries were required in 32% of all donors.
6. The donation of more than one organ occurred in 93% of donors in 2000.
7. The consent rate for specific organs were 100% of kidneys, 100% livers, 94% hearts, 97% lung and 100% pancreas.
8. In 2000, from donors where organs had been retrieved, 91% of kidneys, 94% of livers, 100% of hearts, 93% of lungs and 100% of pancreas were actually transplanted.
9. The average number of organs transplanted per donor was 3.4.
10. New Zealand has provided 15 kidneys, 176 livers, 12 hearts and 31 lungs (a total of 234 organs) to the Australian Transplant Programs in the eleven year period 1989-2000.

ORGAN DONORS IN AUSTRALIA AND NEW ZEALAND

In 2000 donor figures include four donors from Australia (one Victoria, one Queensland, and two South Australia) who went to the operating room however, the decision was made not to retrieve organs. The reasons were; two biopsy results (kidneys unuseable), cancer detected, cirrhosis detected.

The donor rate in both Australia and New Zealand has not changed appreciably over the last five years.

Figure 1

Number of Donors 1996 - 2000

	1996	1997	1998	1999	2000
Queensland	35 (10)	37 (11)	40 (12)	20 (6)	37 (10)
New South Wales	63 (10)	65 (10)	63 (10)	48 (7)	55 (9)
ACT	6 (20)	4 (13)	2 (6)	2 (6)	5 (16)
Victoria	49 (11)	42 (9)	40 (9)	42 (9)	44 (9)
Tasmania	1 (2)	5 (11)	0 (0)	6 (13)	1 (2)
South Australia	25 (17)	25 (17)	35 (24)	30 (20)	30 (20)
Northern Territory	3 (17)	4 (21)	3 (16)	3 (16)	2 (10)
Western Australia	12 (7)	8 (4)	13 (7)	13 (7)	22 (12)
Australia	194 (11)	190 (10)	196 (10)	164 (9)	196 (10)
New Zealand	36 (10)	42 (11)	46 (12)	39 (10)	41 (11)

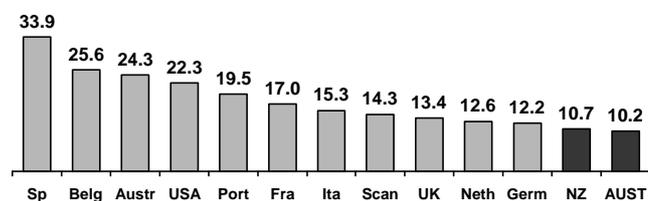
() Donors Per Million of Population

Refer to Appendix for the number of donors by State and Hospital and population

Figure 2

International Donor Statistics 2000

Donors PMP



Scandia Transplant: Denmark, Finland, Norway, Sweden

Source: Council of Europe Newsletter Transplant 2001

Historically the comparison of organ donation rates between States and Countries has been based upon donors per million population (dmp). (Figure 2).

However, the number of deaths that occur and therefore the ability of a deceased person to be a

donor may be a more valuable way of comparing donation rates. (Figures 3 and 4).

Australian data on deaths for 2000 are not available until August of 2001. New Zealand data include 2000.

Figure 3 Donors per Thousand Deaths 1996 - 2000

Year	Qld	NSW	ACT	Vic.	Tas.	SA	NT	WA	Aust.	N.Z.
1996	1.6	1.5	4.8	1.5	0.3	2.2	3.9	1.1	1.5	1.3
1997	1.7	1.5	3.0	1.3	1.3	2.2	4.5	0.7	1.5	1.5
1998	1.8	1.4	1.6	1.2	0.0	3.0	3.6	1.2	1.5	1.8
1999	0.9	1.0	1.5	1.3	1.6	2.7	3.5	1.2	1.3	1.4
2000	-	-	-	-	-	-	-	-	-	1.5

Figure 4 Australian States: Comparison Between Donors per Million Population and Donors per Thousand Deaths () 1996 - 1999

Year	Qld	NSW	ACT	Vic.	Tas.	SA	NT	WA
1996	10 (1.6)	10 (1.4)	20 (4.8)	11 (1.5)	2 (0.3)	17 (2.2)	17 (3.9)	7 (1.1)
1997	11 (1.7)	10 (1.4)	13 (3.0)	9 (1.3)	11 (1.3)	17 (2.2)	21 (4.5)	4 (0.7)
1998	12 (1.8)	10 (1.4)	6 (1.6)	9 (1.2)	0 (0.0)	24 (3.0)	16 (3.6)	7 (1.2)
1999	6 (0.9)	7 (1.0)	6 (1.5)	9 (1.3)	13 (1.6)	20 (2.7)	16 (3.5)	7 (1.2)

DONOR POSTCODES

The Registry commenced the collection of donor residential postcodes in 1998.

In the last three years (1998-2000) there have been five donors from overseas. In 2000, New South Wales had one donor resident in South Australia, Queensland one donor from New South Wales, South Australia two from Victoria, and Queensland and Victoria one from New South Wales.

DONOR PROFILE

Age and Gender Distribution

The mean age for donors has increased from 38.3 to 41.1 years since 1996. In 2000 there were 12 donors (6%) older than 65 years. This is similar to last year. The oldest donor was 77.9 years. (Figure 5).

When comparing Australian States, the mean age ranged from the highest in Victoria of 45.1 years to the lowest of 30.3 years in the ACT. (Figure 6).

The gender distribution by Australian States and New Zealand is shown in Figure 7.

See Figures 8 and 9 for a breakdown of donors according to age and gender in Australia and New Zealand for the years 1998-2000.

Figure 5 Age of Male and Female Donors 1996 - 2000

	Year	Mean (years)			Median (years)			Range in Years
		All	Female	Male	All	Female	Male	
Australia	1996	38.3	40.3	36.9	38.5	46.1	36.2	1.45 - 74.2
	1997	40.4	42.4	39.3	43.1	41.9	43.6	2.5 - 76.1
	1998	40.4	43.8	37.7	43.2	46.2	37.2	0.94 - 73.7
	1999	39.3	43.2	36.4	42.5	47.5	36.2	0.21 - 77.1
	2000	41.1	42.6	40.0	44.1	45.1	43.0	0.4 - 77.9
New Zealand	1996	36.6	37.9	35.1	35.2	42.7	29.9	9.6 - 72.5
	1997	34.8	37.3	33.2	26.4	46.0	23.7	7.1 - 71.6
	1998	38.0	45.0	34.5	35.9	50.1	32.5	2.8 - 69.7
	1999	42.7	45.5	39.3	49.0	50.4	40.3	3.1 - 73.2
	2000	39.7	38.3	40.9	42.7	42.7	43.9	5.5 - 68.5

Figure 6 Australian States Mean Age of Donors 1996 - 2000

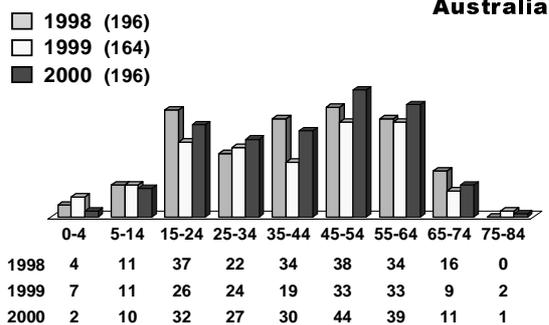
	Qld	NSW	ACT	Vic.	Tas.	SA	NT	WA	Aust.
1996	30.5	38.8	45.8	43.0	47.1	38.5	36.8	35.0	38.3
1997	37.5	39.6	48.3	43.8	38.3	45.3	33.5	28.7	40.4
1998	35.7	42.7	42.1	43.4	0	40.3	44.7	33.9	40.4
1999	40.0	42.4	49.9	40.1	35.8	35.4	24.3	36.5	39.3
2000	40.3	40.5	30.3	45.1	63.1	39.0	44.3	39.7	41.1

Figure 7 Gender of Donors 1989 - 2000

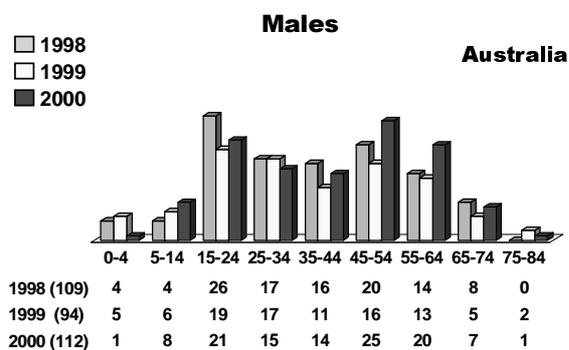
	Female		Male		Total
Queensland	166	(35%)	306	(65%)	472
New South Wales	327	(41%)	468	(59%)	795
ACT	16	(35%)	30	(65%)	46
Victoria	234	(44%)	296	(56%)	530
Tasmania	12	(31%)	27	(69%)	39
South Australia	122	(41%)	173	(59%)	295
Northern Territory	3	(12%)	22	(88%)	25
Western Australia	79	(43%)	106	(57%)	185
Australia	959	(40%)	1428	(60%)	2387
New Zealand 1993-2000	132	(43%)	176	(57%)	308

Figure 8

Age Group of Cadaver Donors



Age and Gender Distribution of Donors



Age and Gender Distribution of Donors

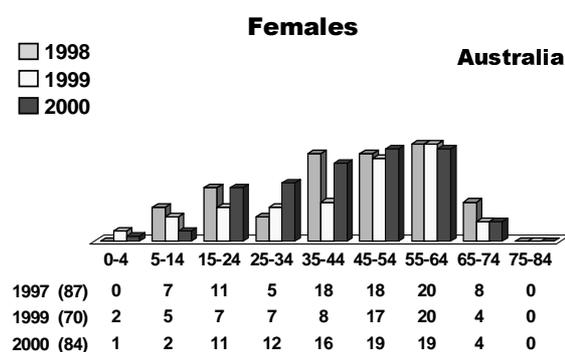
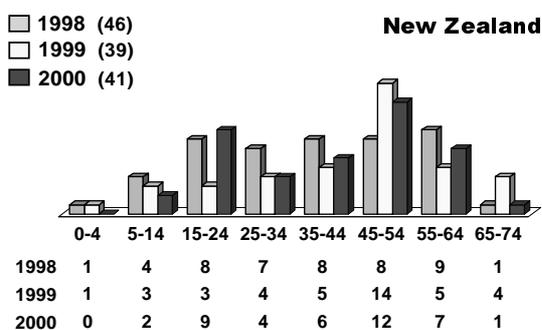
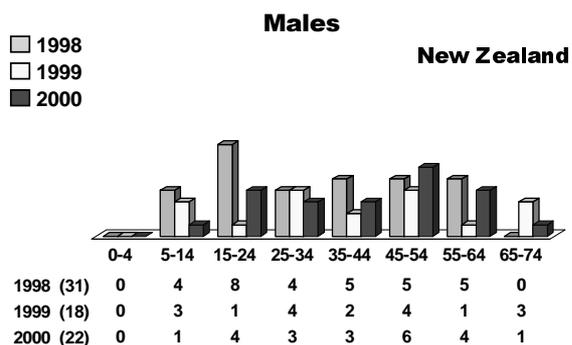


Figure 9

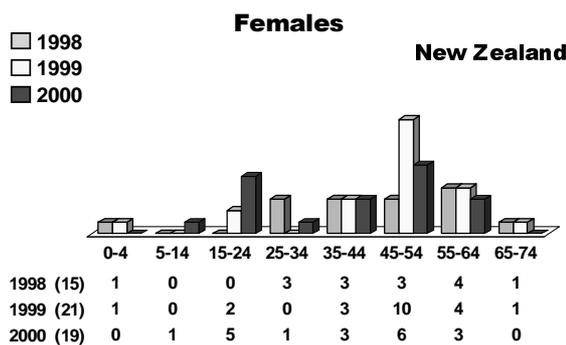
Age Group of Cadaver Donors



Age and Gender Distribution of Donors



Age and Gender Distribution of Donors



INTENDED DONORS

An intended donor is a person for whom consent has been given or volunteered, but for various reasons organ donation did not proceed.

Figure 10 Intended Donors 1998 - 2000

	Qld	NSW	ACT	Vic.	Tas.	SA	NT	WA	Aust.	N.Z.
1998	0	3	0	0	0	2	0	0	5	2
1999	1	4	0	0	0	0	0	0	5	1
2000	0	1	0	0	0	0	1	0	2	1

Reasons why donation did not proceed:

In 1998

Australia

- Hepatitis C antibody positive (two)
- Hepatitis B surface antigen and core antibody positive
- History of melanoma
- Reassessment of medical history, then deemed medically unsuitable

New Zealand

- Hepatitis C antibody positive
- Coroner withdrew permission

In 1999

Australia

- Cardiac Arrest
- Hepatitis C antibody positive
- Hepatitis B surface antigen and core antibody positive
- Hepatitis B core antibody positive and other risk factors
- Infection detected in operating room

New Zealand

- Permission withdrawn

In 2000

Australia

- Late decline of offer by Transplant Unit
- Malignant cerebral tumour detected

New Zealand

- unstable donor

CAUSE OF DEATH - ALL DONORS

Figure 11 shows the cause of death for all organ donors in Australia since 1989 and for New Zealand since 1993. The primary cause of death was cerebrovascular accident (CVA) (48% of all Australian donors and 52% of all New Zealand donors).

Figure 12 shows detailed cause of death by gender for 2000.

Figure 13 shows CVA is responsible for 78% of all deaths in donors 55 years and older, whereas in the 15-34 year age group, trauma accounted for 64% of all deaths, compared to 59% in 2000.

Figure 15 shows a breakdown by Australian States of the major causes of death for total donors in the last eleven years. Of the larger States, in both Queensland and Western Australia trauma (road and non-road) exceeds CVA as a cause of donor death.

Figure 14 shows cause of death according to age and State for organ donors in 2000, and Figure 16 shows data for 1996-2000.

Figures 17-19 show the occupation, ethnic origin and religious denomination of donors in Australia and New Zealand for 1996-2000.

Figure 11

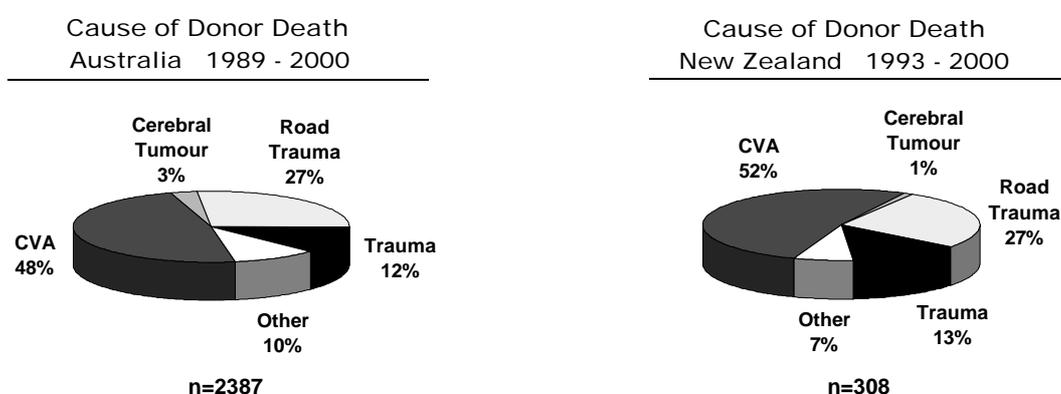


Figure 12

Cause of Donor Death 2000

Causes of Death		Australia			New Zealand		
		Male	Female	Total	Male	Female	Total
CVA	Cerebral Infarct	7	7	14	0	0	0
	Intracranial Haemorrhage	38	50	88	12	12	24
Road Trauma	Cyclist	2	0	2	0	0	0
	Motor Bike Accident	4	0	4	1	0	1
	Motor Vehicle Accident	19	10	29	1	3	4
	Pedestrian	4	1	5	1	0	1
	Other Road Accident	0	1	1	0	0	0
Other Trauma	Fall	13	2	15	2	0	2
	Felony / Crime - Assault	1	0	1	1	0	1
	Gunshot	2	0	2	2	0	2
	Other Trauma	4	0	4	0	0	0
Hypoxia Anoxia	Anaphylaxis	0	0	0	0	1	1
	Carbon Monoxide	1	1	2	0	0	0
	Cardiac Arrest	3	2	5	1	0	1
	Cardio-respiratory Arrest	0	1	1	0	0	0
	Drowning	1	0	1	0	0	0
	Epilepsy	1	0	1	0	1	1
	Fat Embolus	1	0	1	0	0	0
	Hanging	2	1	3	0	0	0
	Hypoglycaemia	0	0	0	0	1	1
	Overdose	0	2	2	0	0	0
	Phenytoin Overdose	0	1	1	0	0	0
	Post Accident	0	1	1	0	0	0
	Seizure - Respiratory Arrest	1	0	1	0	0	0
Ventricular Fibrillation	1	0	1	0	0	0	
Cerebral Tumour	Ependymoma (Benign)	1	0	1	0	0	0
	Glioblastoma (Malignant)	0	2	2	0	0	0
	Medulloblastoma (Malignant)	0	1	1	0	0	0
	Pineal Teratoma (Malignant)	1	0	1	0	0	0
Other	Cardiomyopathy	1	0	1	0	0	0
	Cerebral Oedema	1	0	1	0	1	1
	Hydrocephalus	0	0	0	1	0	1
	Meningitis (Meningococcal)	2	0	2	0	0	0
	Methanol	0	1	1	0	0	0
	SIDS	1	0	1	0	0	0
Total	112	84	196	22	19	41	

Figure 13

Cause of Donor Death Related to Age Group 2000

	Australia					New Zealand				
	0-14	15-34	35-54	55 on	Total	0-14	15-34	35-54	55 on	Total
CVA	1	9	52	40	102	0	2	15	7	24
Trauma (road)	3	30	7	1	41	0	5	1	0	6
Trauma (non-road)	1	8	8	5	22	0	3	1	1	5
Other	7	12	7	5	31	2	3	1	0	6
Total	12	59	74	51	196	2	13	18	8	41

Figure 14

Australian States
Cause of Donor Death Related to Age Group 2000

		0-14	15-34	35-54	55 on	Total
Queensland	CVA	1	0	10	6	17
	Trauma (road)	0	7	2	0	9
	Trauma (non-road)	1	0	2	2	5
	Other	0	4	1	1	6
	Total	2	11	15	9	37
NSW	CVA	0	3	14	10	27
	Trauma (road)	1	9	2	0	12
	Trauma (non-road)	0	5	3	1	9
	Other	0	3	3	1	7
	Total	1	20	22	12	55
ACT	CVA	0	1	1	0	2
	Trauma (road)	0	1	1	0	2
	Trauma (non-road)	0	1	0	0	1
	Other	0	0	0	0	0
	Total	0	3	2	0	5
Victoria	CVA	0	1	15	11	27
	Trauma (road)	1	6	0	1	8
	Trauma (non-road)	0	1	0	1	2
	Other	0	3	3	1	7
	Total	1	11	18	14	44
Tasmania	CVA	0	0	0	1	1
	Trauma (road)	0	0	0	0	0
	Trauma (non-road)	0	0	0	0	0
	Other	0	0	0	0	0
	Total	0	0	0	1	1
South Australia	CVA	0	1	8	5	14
	Trauma (road)	1	3	1	0	5
	Trauma (non-road)	0	1	2	1	4
	Other	4	2	0	1	7
	Total	5	7	11	7	30
Northern Territory	CVA	0	0	0	1	1
	Trauma (road)	0	1	0	0	1
	Trauma (non-road)	0	0	0	0	0
	Other	0	0	0	0	0
	Total	0	1	0	1	2
Western Australia	CVA	0	3	4	6	13
	Trauma (road)	0	3	1	0	4
	Trauma (non-road)	0	0	1	0	1
	Other	3	0	0	1	4
	Total	3	6	6	7	22

Figure 15

Cause of Donor Death 1989 - 2000

	Qld	NSW	ACT	Vic.	Tas.	SA	NT	WA	Aust.	N.Z. *
CVA	41%	51%	48%	52%	46%	45%	20%	47%	48%	52%
Trauma (road)	30%	25%	17%	25%	28%	24%	40%	37%	27%	27%
Trauma (non-road)	17%	13%	20%	8%	18%	13%	20%	6%	12%	13%
Other	12%	11%	15%	15%	8%	18%	20%	10%	13%	8%

* N.Z. 1993 -2000

Figure 16

Cause of Donor Death 1996 - 2000

		1996	1997	1998	1999	2000
Queensland	CVA	12	23	20	12	17
	Trauma (road)	12	6	9	5	9
	Trauma (non-road)	8	4	5	1	5
	Other	3	4	6	2	6
	Total	35	37	40	20	37
NSW	CVA	28	37	32	25	27
	Trauma (road)	16	14	15	8	12
	Trauma (non-road)	9	6	8	9	9
	Other	10	8	8	6	7
	Total	63	65	63	48	55
ACT	CVA	3	2	2	1	2
	Trauma (road)	1	2	0	0	2
	Trauma (non-road)	0	0	0	1	1
	Other	2	0	0	0	0
	Total	6	4	2	2	5
Victoria	CVA	25	30	23	29	27
	Trauma (road)	11	3	6	7	8
	Trauma (non-road)	6	4	2	1	2
	Other	7	5	9	5	7
	Total	49	42	40	42	44
Tasmania	CVA	0	3	0	4	1
	Trauma (road)	0	1	0	2	0
	Trauma (non-road)	1	1	0	0	0
	Other	0	0	0	0	0
	Total	1	5	0	6	1
South Australia	CVA	9	14	17	13	14
	Trauma (road)	9	3	6	7	5
	Trauma (non-road)	5	3	2	3	4
	Other	2	5	10	7	7
	Total	25	25	35	30	30
Northern Territory	CVA	0	1	1	0	1
	Trauma (road)	2	1	0	2	1
	Trauma (non-road)	1	1	1	0	0
	Other	0	1	1	1	0
	Total	3	4	3	3	2
Western Australia	CVA	6	2	6	4	13
	Trauma (road)	3	5	5	6	4
	Trauma (non-road)	0	1	1	3	1
	Other	3	0	1	0	4
	Total	12	8	13	13	22
New Zealand	CVA	21	13	22	24	24
	Trauma (road)	11	18	11	8	6
	Trauma (non-road)	2	9	6	4	5
	Other	2	2	7	3	6
	Total	36	42	46	39	41

Figure 17 Occupation of Donors 1996 - 2000

	Australia					New Zealand				
	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000
Blue collar	35	30	28	28	39	3	3	5	1	3
Home duties	22	30	29	21	17	4	1	5	5	3
Invalid pensioner	8	7	8	5	4	0	1	0	0	0
Management	0	2	2	3	4	2	1	0	1	1
Other	0	1	4	1	2	0	0	0	0	0
Pre-school	6	3	4	7	4	0	0	1	1	0
Primary industry	4	5	1	4	7	0	2	2	3	3
Professional	20	8	7	13	9	2	3	2	3	0
Retired	13	15	17	13	23	3	1	1	3	2
Small business owner	5	5	0	0	2	0	0	0	0	1
Student	24	19	23	25	21	8	6	9	4	7
Tradesperson	9	8	7	6	8	5	9	4	3	2
Unemployed	8	9	5	3	6	1	3	1	0	1
Unknown	22	35	46	25	40	4	8	13	11	14
White collar	18	13	15	10	10	4	4	3	4	4
Total	194	190	196	164	196	36	42	46	39	41

Figure 18 Ethnic Origin of Donors 1996 - 2000

	Australia					New Zealand				
	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000
Aboriginal	2	0	1	0	1	0	0	0	0	0
Arab	0	1	0	0	0	0	0	0	0	0
Caucasoid	184	184	189	154	184	35	40	43	36	38
Greek	(2)	(2)	(3)	(3)	(0)	0	0	0	0	0
Italian	(3)	0	(2)	(3)	(3)	0	0	0	0	0
Chinese	2	1	1	3	2	0	0	0	0	0
Filipino	1	0	1	0	2	0	1	0	1	0
Indian	0	0	1	0	2	0	0	0	0	0
Japanese	0	0	0	1	1	0	0	0	0	0
Korean	0	0	1	0	1	0	0	0	0	0
Maori	0	1	0	1	0	0	0	2	2	3
Mauritian	0	0	2	0	0	0	0	0	0	0
Pacific Islander	1	1	0	2	1	1	0	1	0	0
Pakistani	0	0	0	0	0	0	0	0	0	0
Sri Lankan	1	0	0	1	1	0	1	0	0	0
Vietnamese	3	2	0	2	1	0	0	0	0	0
Total	194	190	196	164	196	36	42	46	39	41

Figure 19 Religious Denomination of Donors 1996 - 2000

	Australia					New Zealand				
	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000
Buddhist	2	2	2	3	2	0	1	0	0	0
Christian	108	106	93	87	110	11	8	7	11	9
Hindu	0	0	0	0	1	0	0	0	0	0
Jehovahs Witness	0	0	0	0	1	0	0	0	0	0
Jewish	2	0	0	0	0	0	0	0	0	0
Muslim	0	1	0	1	0	0	0	0	0	0
Ratna	0	0	0	0	0	0	0	0	0	1
Shinto	0	0	0	0	1	0	0	0	0	0
No religion	19	7	25	20	20	5	4	5	2	2
Unknown	63	74	76	53	61	20	29	34	26	29
Total	194	190	196	164	196	36	42	46	39	41

HEART-BEATING DONORS

The vast majority of donors are heart-beating brain dead patients.

In 2000 there was one non-heart beating donor in Australia (Northern Territory) and none in New Zealand. (Figure 20). The need for cardiopulmonary resuscitation in the donor prior to organ donation is shown in Figure 21 and 22.

Figure 20

		Australia					New Zealand				
		1996	1997	1998	1999	2000	1996	1997	1998	1999	2000
Yes		192	187	194	163	195	35	41	46	39	41
No		2	3	2	1	1	1	1	0	0	0
Total		194	190	196	164	196	36	42	46	39	41

Figure 21

		Australia					New Zealand				
		1996	1997	1998	1999	2000	1996	1997	1998	1999	2000
Yes		40	32	39	34	44	4	2	6	10	6
No		152	153	156	129	152	30	40	39	29	35
Unknown		2	5	1	1	0	2	0	1	0	0
Total		194	190	196	164	196	36	42	46	39	41

Figure 22

		Australian States Cardiopulmonary Resuscitation 2000 (1999)							
		Qld	NSW	ACT	Vic.	Tas.	SA	NT	WA
Yes		12 (6)	10 (8)	0 (0)	12 (12)	0 (0)	6 (6)	0 (1)	4 (1)
No		25 (14)	45 (40)	5 (2)	32 (29)	1 (6)	24 (24)	2 (2)	18 (12)
Unknown		0 (0)	0 (0)	0 (0)	0 (1)	0 (0)	0 (0)	0 (0)	0 (0)
Total		37 (20)	55 (48)	5 (2)	44 (42)	1 (6)	30 (30)	2 (3)	22 (13)

VIROLOGY SCREENING

Figure 23

Cytomegalovirus (CMV) Status of Donors 1996 - 2000

	Australia					New Zealand				
	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000
Positive	139	140	129	111	128	19	27	20	23	24
Negative	55	49	67	53	68	16	15	21	14	17
Not done	0	1	0	0	0	1	0	5	2	0
Total	194	190	196	164	196	36	42	46	39	41

EPSTEIN-BARR VIRUS (EBV) STATUS OF DONORS

There are no national guidelines requiring organ donors to be tested for EBV. However in 2000, 34% (66) of donors were tested, with 76% recording a positive result.

HEPATITIS B AND HEPATITIS C STATUS OF DONORS

Since 1993, all donors in Australia and New Zealand have been negative for both Hepatitis C antibody and Hepatitis B surface antigen.

In 1998, the Registry commenced collection of Hepatitis B core antibody results.

A positive result was recorded for seven (4%) of Australian donors and three (7%) of New Zealand donors in 2000.

BLOOD GROUP OF DONORS

The distribution of blood groups in the general population is 'O': 49%, 'A': 39%, 'B': 9%, 'AB': 3% (data from the Australian Red Cross Blood Bank), and for New Zealand 'O': 46%, 'A': 40%, 'B': 10% and 'AB': 4% (Auckland Regional Blood Centre).

The distribution of donors for the total reporting period for each country is similar to population distribution (Figures 24, 25).

Figure 24



Figure 25

Blood Group of Donors 1996 - 2000

		1996		1997		1998		1999		2000	
Australia	O	92	47%	84	44%	102	52%	93	57%	90	46%
	A	86	44%	80	42%	70	36%	50	30%	89	45%
	B	13	7%	22	12%	18	9%	17	10%	12	6%
	AB	3	2%	4	2%	6	3%	4	3%	5	3%
	Total		194	100%	190	100%	196	100%	164	100%	196
New Zealand	O	14	39%	23	55%	22	48%	15	39%	19	46%
	A	16	44%	11	26%	14	30%	18	46%	20	49%
	B	5	14%	5	12%	6	13%	4	10%	2	5%
	AB	1	3%	3	7%	4	9%	2	5%	0	0%
	Total		36	100%	42	100%	46	100%	39	100%	41

MEDICAL CONDITION OF DONORS

The following information relating to diabetes, hypertension, smoking and alcohol intake has been collected since 1993.

Diabetes

There were two Type 1 diabetic (insulin dependent) and three Type 2 (non-insulin requiring) accepted as donors in Australia in 2000. There was one Type 1 (insulin dependent) diabetic donor in New Zealand in 2000.

Hypertension

In 2000, 42 (21%) of Australian donors had a past history of chronic hypertension. New Zealand recorded three donors (7%) with a past history of chronic hypertension. (Figure 26, 27)

Smoking

In 2000, 37% (73) of Australian donors were

recorded as being current smokers, and 13% (26 donors) were recorded as being former smokers. In New Zealand, 46% (19 donors) were reported as current smokers and 5% (2 donors) recorded as being former smokers. (Figure 26, 27)

Alcohol

In 2000, 24% of Australian donors were recorded as having an alcohol intake of >40 grams per day. However, for the same year in New Zealand it was 10%. (Figure 26, 27)

Donor weight

The allocation of heart, lungs and livers are based on the matching of recipient and donor weight. In 2000 there were nine donors in Australia and one in New Zealand who weighed less than 40 kilograms. (Figure 28)

Figure 26

Donor Diabetes, Hypertension, Smoking and Alcohol 1996 - 2000

		1996	1997	1998	1999	2000
Australia		(n=194)	(n=190)	(n=196)	(n=164)	(n=196)
	Diabetes Type 1	0 (0%)	2 (1%)	2 (1%)	1 (<1%)	2 (1%)
	Diabetes Type 2	2 (1%)	2 (1%)	3 (1.5%)	3 (2%)	3 (1.5%)
	Hypertension	21 (11%)	28 (15%)	31 (16%)	24 (15%)	42 (21%)
	Unknown	10 (5%)	15 (8%)	9 (5%)	2 (1%)	4 (2%)
	Smoking					
	Current	77 (40%)	66 (35%)	66 (34%)	54 (33%)	73 (37%)
	Former	16 (8%)	15 (8%)	10 (5%)	17 (10%)	26 (13%)
	Unknown	16 (8%)	17 (9%)	12 (6%)	10 (6%)	2 (1%)
	Alcohol					
	Current	68 (35%)	63 (33%)	45 (23%)	40 (24%)	47 (24%)
	Former	4 (2%)	2 (1%)	4 (1%)	0 (0%)	7 (4%)
	Unknown	27 (14%)	28 (15%)	37 (19%)	27 (16%)	15 (8%)
New Zealand		(n=36)	(n=42)	(n=46)	(n=39)	(n=41)
	Diabetes Type 1	0 (0%)	0 (0%)	2 (0%)	0 (0%)	1 (2%)
	Diabetes Type 2	0 (0%)	0 (0%)	1 (0%)	0 (0%)	0 (0%)
	Hypertension	2 (6%)	8 (19%)	4 (9%)	8 (21%)	3 (7%)
	Unknown	0 (0%)	1 (2%)	1 (2%)	0 (0%)	0 (0%)
	Smoking					
	Current	11 (31%)	15 (36%)	11 (24%)	14 (36%)	19 (46%)
	Former	0 (0%)	2 (5%)	1 (2%)	1 (2.5%)	2 (5%)
	Unknown	0 (0%)	3 (7%)	3 (7%)	2 (5%)	0 (0%)
	Alcohol					
	Current	4 (11%)	4 (10%)	2 (4%)	1 (2.5%)	4 (10%)
	Former	0 (0%)	2 (5%)	1 (2%)	0 (0%)	1 (2%)
	Unknown	1 (3%)	4 (10%)	4 (9%)	3 (4%)	0 (0%)

Figure 27

Medical Condition of Donors by Australian States 2000 (1999)

	Qld	NSW	ACT	Vic.	Tas.	SA	NT	WA	Total
Diabetes Type 1	0 (0)	1 (0)	1 (0)	0 (0)	0 (0)	0 (1)	0 (0)	0 (0)	2 (1)
Diabetes Type 2	0 (0)	0 (2)	0 (0)	0 (1)	1 (0)	1 (0)	0 (0)	1 (0)	3 (3)
Hypertension	4 (2)	12 (8)	1 (1)	11 (6)	1 (1)	8 (3)	0 (0)	5 (3)	42 (24)
Smoking Current	12 (9)	18 (15)	0 (0)	20 (11)	1 (2)	9 (11)	0 (1)	13 (5)	73 (54)
Alcohol intake >40 gms/day	8 (1)	9 (6)	0 (0)	16 (20)	1 (2)	7 (5)	0 (2)	6 (4)	47 (40)

Figure 28 Donor Weight 1996 - 2000

	Years	Kilograms									Total
		0-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90 +	
Australia	1996	5	2	2	6	18	42	47	47	22	191
	1997	3	1	2	2	17	28	52	43	38	186
	1998	4	2	4	6	22	34	60	36	26	194
	1999	7	4	3	2	10	27	49	40	22	164
	2000	3	4	2	6	23	34	51	41	32	196
New Zealand	1996	0	0	1	2	6	7	12	8	0	36
	1997	0	0	3	1	3	7	15	10	2	41
	1998	1	0	0	1	3	12	12	15	2	46
	1999	0	4	0	0	2	11	8	9	4	38
	2000	1	0	0	0	2	11	16	8	3	41

DONOR INTENTION

Figures 29 and 30 show whether the donor had recorded an intention to donate through a signed driver's licence or a donor card.

In 2000, 34% of Australian and 22% of New Zealand organ donors had a signed driver's licence. There was a large variation between the Australian States, with the highest recordings in Queensland 54%, NSW 47%, and the lowest in Victoria 2% and Tasmania and Northern Territory

0%. There are a large number of donors in the "unknown" category.

In 2000, only six Australian (3%) and no New Zealand donors had a signed donor card.

There were ten organ donors who had enrolled in a Registry; five on the Western Australia Registry, four in the Victoria Registry, and a South Australian who had enrolled in Victoria.

Figure 29 Driver's Licence Status 1996 - 2000

	Australia					New Zealand				
	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000
Yes	39 (20%)	46 (24%)	54 (28%)	34 (21%)	67 (34%)	6 (17%)	11 (26%)	10 (22%)	6 (15%)	9 (22%)
No	67	53	60	55	59	6	2	1	3	0
Student / Not Applicable	22	18	18	23	21	1	3	9	4	5
Unknown	66	73	64	52	49	23	26	26	26	27
Total	194	190	196	164	196	36	42	46	39	41

Donor Card Status 1996 - 2000

Yes	11	5	7	6	6	0	1	0	0	0
No	79	77	92	71	107	31	33	39	26	23
Student / Not Applicable	22	18	21	24	19	5	3	7	13	18
Unknown	82	90	76	63	64	0	5	0	0	0
Total	194	190	196	164	196	36	42	46	39	41

Figure 30 Australian States Driver's Licence Status 2000 (1999)

	Qld	NSW	ACT	Vic.	Tas.	SA	NT	WA	Total
Yes	20 (5)	26 (12)	2 (1)	1 (2)	0 (2)	12 (7)	0 (0)	6 (5)	67 (34)
No	3 (1)	2 (2)	0 (0)	35 (27)	1 (2)	7 (13)	1 (2)	10 (8)	59 (55)
Student / Not Applicable	5 (1)	3 (5)	1 (0)	3 (7)	0 (2)	5 (7)	0 (1)	4 (0)	21 (23)
Unknown	9 (13)	24 (29)	2 (1)	5 (6)	0 (0)	6 (3)	1 (0)	2 (0)	49 (52)
Total	30 (20)	55 (48)	5 (2)	44 (42)	1 (6)	30 (30)	2 (3)	22 (13)	196 (164)

Australian States Donor Card Status 2000 (1999)

Yes	0 (1)	1 (2)	1 (0)	3 (1)	0 (0)	1 (2)	0 (0)	0 (0)
No	24 (4)	10 (5)	1 (0)	32 (28)	1 (3)	21 (18)	1 (2)	17 (11)
Student / Not Applicable	4 (1)	3 (4)	0 (0)	2 (7)	0 (2)	5 (7)	0 (1)	5 (2)
Unknown	9 (14)	41 (37)	3 (2)	7 (6)	0 (1)	3 (3)	1 (0)	0 (0)
Total	37 (20)	55 (48)	5 (2)	44 (42)	1 (6)	30 (30)	2 (3)	22 (13)

CONSENT FOR ORGAN DONATION

Figure 31 shows that Intensive Care Clinicians and Registrars played the predominant role in requesting consent for organ donation in both Australia (57%) and New Zealand (85%) in 2000.

There is a large difference between the Australian States in the role of the Donor Coordinator in seeking consent. In 2000, consent was sought by the Donor Coordinator in Queensland 49%, Western Australia 32%, South Australia 23%, New South Wales 18%, Victoria 2%. Northern Territory and

Tasmania do not have resident Donor Coordinators. (Figure 32).

Nineteen percent of families volunteered consent for organ donation in Australia (this is similar to last year) and 5% in New Zealand. ACT had the highest number of donor families who volunteered consent, 60% in 2000, followed by Northern Territory 50%, Western Australia 32%, Victoria 20%, New South Wales 16%, South Australia 13%, Queensland 11%, and Tasmania 0%.

Figure 31 Consent 1996 - 2000

	Australia					New Zealand				
	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000
ICU Clinician/Registrar	123	108	118	101	112	21	27	41	33	35
Renal Physician/Registrar	0	3	0	0	0	4	1	1	2	1
Emergency Consultant	0	0	1	1	0	0	6	4	1	0
Donor Coordinator	18	24	28	30	44	0	0	0	1	0
Volunteered	51	54	45	30	37	8	7	0	2	2
Nursing Staff	0	1	2	2	3	0	1	0	0	0
Social Worker	2	0	1	0	0	0	0	0	0	0
Others	0	0	1	0	0	3	0	0	0	3
Total	194	190	196	164	196	36	42	46	39	41

Figure 32 Consent 2000 (1999)

	Qld	NSW	ACT	Vic.	Tas.	SA	NT	WA	Aust.	N.Z.
ICU Clinician/Registrar	12 (9)	36 (37)	2 (2)	34 (26)	1 (5)	19 (14)	0 (2)	8 (8)	112 (101)	35 (33)
Renal Phys/Registrar	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (2)
Donor Coordinator	18 (5)	10 (3)	0 (0)	1 (5)	0 (0)	7 (12)	1 (0)	7 (5)	44 (30)	0 (1)
Volunteered	4 (5)	9 (8)	3 (0)	9 (11)	0 (1)	4 (4)	1 (1)	7 (0)	37 (30)	2 (2)
Nursing Staff	3 (1)	0 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	3 (2)	0 (0)
Other	0 (0)	0 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (1)	2 (1)
Total	37 (20)	55 (50)	5 (2)	44 (42)	1 (6)	30 (30)	2 (3)	22 (13)	196 (164)	41 (39)

DIRECT CONTACT WITH DONOR COORDINATOR

There were ten families (5%) in Australia in which the Donor Coordinator had no contact, compared to 30 families (73%) in New Zealand.

Figure 33 Direct Contact with Donor Coordinator 2000

	Qld	NSW	ACT	Vic.	Tas.	SA	NT	WA	Aust.	N.Z.
Face to Face	30 (81%)	50 (91%)	4 (80%)	40 (91%)	1 (100%)	23 (77%)	1 (50%)	21 (95%)	170 (88%)	11 (27%)
Telephone	5 (14%)	3 (5%)	1 (20%)	4 (9%)	0 (0%)	2 (6%)	0 (0%)	1 (5%)	16 (8%)	0 (0%)
None	2 (5%)	2 (4%)	0 (0%)	0 (0%)	0 (0%)	5 (17%)	1 (50%)	0 (0%)	10 (5%)	30 (73%)
Total	37 (100%)	55 (100%)	5 (100%)	44 (100%)	1 (100%)	30 (100%)	2 (100%)	22 (100%)	196 (100%)	41 (100%)

CORONER'S CASES

Forty seven percent of all Australian donors were subject to Coronerial inquiry. This figure remains similar to 1999 (46%)

In New Zealand it was 32% for 2000, a decrease from 54% in 1998 and 46% in 1999.

Figure 34 Coroner's Cases 1996 - 2000

	Australia					New Zealand				
	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000
Yes	110	82	94	76	93	17	28	25	18	13
No	84	108	102	88	103	19	14	21	21	28
Total	194	190	196	164	196	36	42	46	39	41

Figure 35 Australian States Coroner's Cases 2000 (1999)

	Qld	NSW	ACT	Vic.	Tas.	SA	NT	WA
Yes	22 (6)	31 (21)	4 (2)	12 (12)	0 (2)	16 (21)	1 (3)	7 (9)
No	15 (14)	24 (27)	1 (0)	32 (30)	1 (4)	14 (9)	1 (0)	15 (4)
Total	37 (20)	55 (48)	5 (2)	44 (42)	1 (6)	30 (30)	2 (3)	22 (13)

SUMMARY - ORGANS REQUESTED, CONSENT GIVEN, RETRIEVED AND TRANSPLANTED

The information relating to the request for organ donation refers only to those patients who become organ donors. If consent was sought and refused, the Registry has no record of these potential donors.

The difference between a request and a consent is a known objection by the donor or family refusal for

the specific organ. Reasons for not requesting organs, not retrieving and not transplanting are documented for all of the specific organs.

Figure 36 shows the outcome of organs requested in 2000 (1999).

Figure 36 Outcome Following Request for Organ Donation 2000 (1999)

		Kidneys	Liver	Heart	Lungs	Pancreas
Australia	Requested	386 (322)	189 (160)	169 (144)	334 (278)	120 (79)
	Consent Given	386 (320)	187 (159)	160 (138)	314 (270)	110 (71)
	Retrieved	370 (300)	146 (124)	64 (69)	162 (118)	34 (22)
	Transplanted	350 (284)	142 (123)	59 (67)	155 (111)	26 (17)
New Zealand	Requested	82 (78)	40 (36)	34 (30)	34 (62)	28 (27)
	Consent Given	82 (78)	40 (36)	32 (29)	33 (62)	28 (26)
	Retrieved	82 (78)	36 (30)	13 (11)	28 (16)	3 (2)
	Transplanted	75 (72)	34 (28)	13 (11)	26 (16)	3 (2)

* Split Liver (5) 2000, (8) 1999.

Kidneys and lungs are counted as separate organs.

ORGANS REQUESTED

From the 196 Australian organ donors in 2000, the request for specific organs were: kidneys 98%, liver 96%, heart 86%, lungs 85% and pancreas 61%.

From the 41 New Zealand donors in 2000, the request for specific organs were: kidneys 100%, liver 98%, heart 83%, lungs 83% and pancreas 68%.

Figure 37

Trend to Multiple Organ Retrieval 1996 - 2000

No. of Organs	Australia					New Zealand				
	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000
Single	27%	24%	23%	17%	21%	17%	33%	20%	21%	7%
Two	24%	23%	32%	30%	29%	44%	31%	50%	44%	42%
Three	25%	23%	19%	27%	24%	25%	33%	16%	23%	34%
Four	18%	24%	20%	23%	20%	14%	3%	12%	10%	15%
Five	6%	6%	6%	3%	6%	0%	0%	2%	2%	2%

Figure 38

State by State Comparison of Multiple Organ Retrieval 2000

No. of Organs	Qld	NSW	ACT	Vic.	Tas.	SA	NT	WA	Aust.	N.Z.
Single	8 (22%)	5 (9%)	0 (0%)	10 (23%)	1 (100%)	7 (24%)	1 (50%)	8 (36%)	40 (21%)	3 (7%)
Two	13 (34%)	17 (31%)	2 (40%)	8 (18%)	0 (0%)	11 (38%)	1 (50%)	4 (18%)	56 (29%)	17 (42%)
Three	8 (22%)	12 (22%)	1 (20%)	12 (30%)	0 (0%)	7 (24%)	0 (0%)	6 (27%)	47 (24%)	14 (34%)
Four	8 (22%)	13 (24%)	1 (20%)	12 (27%)	0 (0%)	2 (7%)	0 (0%)	3 (14%)	39 (20%)	6 (15%)
Five	0 (0%)	8 (14%)	1 (20%)	1 (2%)	0 (0%)	2 (7%)	0 (0%)	1 (5%)	13 (6%)	1 (2%)
Total	37 (100%)	55 (100%)	5 (100%)	44 (100%)	1 (100%)	29 (100%)	2 (100%)	22 (100%)	195 (100%)	41 (100%)

NB: 2 kidneys = 1 organ, 2 lungs = 1 organ

On occasions when only one kidney is retrieved, this is also defined as one organ.

ORGAN RECIPIENTS TRANSPLANTED

Australia had a mean of 3.35 organs from each donor used for transplantation in 2000, similar to New Zealand at 3.4.

For the purpose of this calculation, the number of recipients transplanted is used, rather than the

number of organs.

The ACT had the highest number of organs transplanted, 4 per donor, followed by New South Wales 3.75, Victoria 3.5 and Queensland 3.24. These figures exclude tissue transplantation.

Figure 39

Organ Recipients Transplanted per Donor 2000

	Qld	NSW	ACT	Vic.	Tas.	SA	NT	WA	Aust.	N.Z.
No. Organs Transplanted	120	206	20	154	2	88	5	61	656	139
No. of Donors	37	55	5	44	1	30	2	22	196	41
Average per Donor	3.24	3.75	4	3.5	2	2.9	2.5	2.8	3.35	3.4

Double lungs = 1 organ (1 recipient)

Two kidneys = 2 organs

EXCHANGE OF ORGANS

Figure 40 shows the number of organs that were sent and received between Australian States and New Zealand. A balance is maintained between Australian Regions for the allocation of kidneys. For this purpose Victoria/Tasmania, South Australia/Northern Territory, and NSW/ACT are considered Regions.

This is achieved by the National Organ Matching System (NOMS) in which all Australian States participate.

There is no monitoring of allocation for State balance for other organs.

Figure 40
Exchange of Organs Between States and New Zealand 2000 (1999)

	Exchange	Kidneys	Liver	Heart	Lungs *	Pancreas	Total
Queensland	Sent	9 (8)	3 (2)	5 (2)	7 (2)	2 (3)	26 (17)
	Received	10 (6)	+20 (19)	4 (7)	5 (10)	0 (0)	39 (42)
New South Wales	Sent	12 (10)	+13 (6)	5 (3)	10 (4)	0 (0)	40 (23)
	Received	30 (21)	16 (21)	6 (7)	21 (12)	6 (5)	79 (66)
ACT	Sent	9 (4)	5 (2)	2 (0)	6 (0)	1 (0)	23 (6)
Victoria	Sent	13 (6)	11 (10)	0 (1)	4 (1)	0 (0)	28 (18)
	Received	10 (15)	12 (13)	9 (9)	34 (21)	0 (2)	65 (60)
Tasmania	Sent	2 (9)	0 (5)	0 (2)	0 (6)	0 (2)	2 (24)
South Australia	Sent	6 (10)	+19 (18)	6 (13)	19 (21)	3 (2)	53 (64)
	Received	13 (13)	4 (0)	0 (0)	0 (0)	0 (0)	17 (13)
Northern Territory	Sent	4 (6)	1 (3)	0 (1)	0 (3)	0 (0)	5 (13)
Western Australia	Sent	12 (4)	5 (5+)	1 (0)	10 (2)	0 (0)	28 (11)
	Received	4 (4)	6 (3)	0 (0)	0 (0)	0 (0)	10 (7)
New Zealand	Sent	0 (2)	7 (7)	0 (1)	4 (2)	0 (0)	11 (12)
	Received	0 (0)	6 (6)	0 (0)	0 (0)	0 (0)	6 (6)

*Total number of lungs (not recipients).

+ Number of recipients of livers.

Figure 41

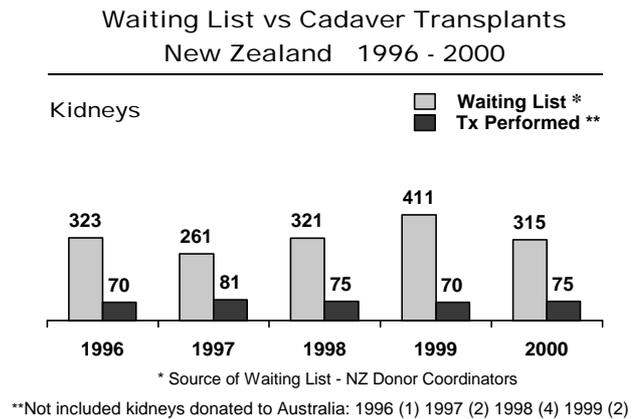
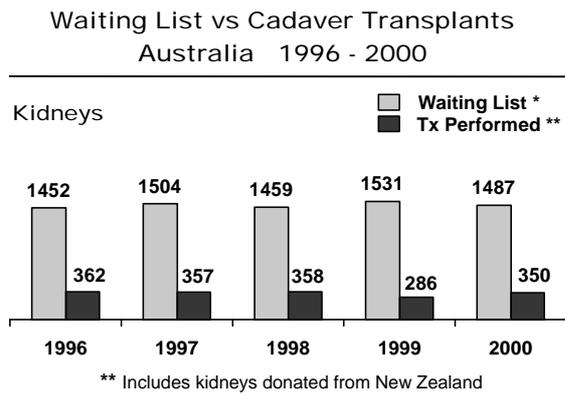
Summary of Organs from New Zealand Donors Transplanted in Australia 1989 - 2000

Year	Liver	Heart	Lungs	Kidneys	Total
1989	1	0	0	0	1
1990	7	0	0	0	7
1991	13	0	0	0	13
1992	24	0	0	2	26
1993	16	0	0	0	16
1994	21	0	2	4	27
1995	21	5	5	0	31
1996	23	1	4	1	29
1997	22	2	2	2	28
1998	16	3	8	4	31
1999	7	1	2	2	12
2000	7	0	4	0	11
Total	176	12	31	15	234

KIDNEY DONATION

Figure 42 shows the number of Australian and New Zealand patients waiting for a kidney transplant and the number of cadaveric transplants performed for each year from 1996-2000.

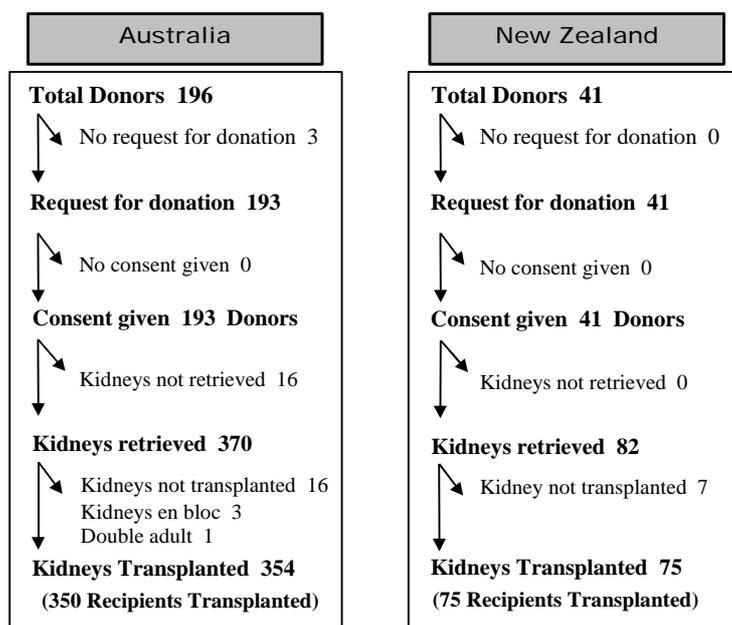
Figure 42



* Data as at 30-Jun-1996 ACCORD Newsletter 14, published Jul-1996
 Data as at 30-Jun-1997 ACCORD Newsletter 17, published Aug-1997
 Data as at 31-Dec-1998 Australians Donate
 Data as at Feb-2000 Individual Transplant Units and the National Organ Matching System
 Data as at Jan-2001 Individual Transplant Units and the National Organ Matching System

Figure 43

Outcome of Request for Kidney Donation 2000



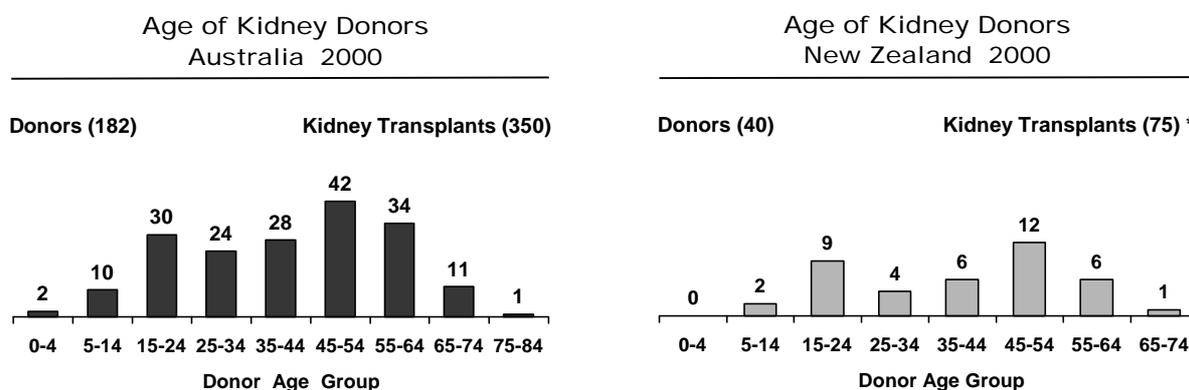
Refer to Appendices for reasons kidneys were not requested, not retrieved and not transplanted.

Figure 44 Age of Kidney Donors 1996 - 2000

	Year	00-04	05-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	Total
Australia	1996	5 (3)	10	36	29	36	39	25	8	0	188
	1997	3 (2)	8	32	21	36	46	21	12	3	182
	1998	1 (1)	10	37	22	32	33	34 (1*)	14 (1x)	0	183
	1999	4 (3)	11 (2)	24	22	17	32	29	9 (1x)	2 (1x)	150
	2000	2 (3)	10	30	24	28	42	34 (1x)	11	1	182
New Zealand	1996	0	2	12	3	3	9	6	1	0	36
	1997	0	4	14	4	3	9	7	1	0	42
	1998	1 (1)	4	8	6	8	7	6	1	0	41
	1999	0	3 (1)	3	4	4	14	5	4	0	37
	2000	0	2	9	4	6	12	6	1	0	40

() En-Bloc Kidneys * Horseshoe Kidney (Adult) x Double Adult

Figure 45



KIDNEY PERFUSION METHODS

Ross continues to be the preservation solution of choice (76%) when only one solution is used. University of Wisconsin (UW) was used as the final storage solution in 49% of cases.

Figure 46 Kidney Perfusion with Only One Solution 1996 - 2000

	Australia					New Zealand				
	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000
Ross	114	71	46	38	26	8	12	6	10	2
UW	22	34	16	12	8	2	14	71	66	78
Collins	10	6	8	0	0	8	2	2	0	0
Hartmans	2	0	0	0	0	0	0	2	0	0
Baxter's Fluid	0	0	0	0	0	0	0	0	0	2
Total	148	111	70	50	34	18	28	81	76	82

Figure 47 Final Storage Solution - Kidneys 1996 - 2000

	Australia					New Zealand				
	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000
Ross	130	99	60	81	140	12	14	6	10	7
UW	219	227	269	207	180	52	68	77	68	78
Collins	34	40	36	10	8	8	2	2	0	0
Hartmans	2	0	0	2	42	0	0	2	0	0
Baxter's Fluid	0	0	0	0	0	0	0	0	0	2
Total	385	366	365	300	370	72	84	87	78	82

Kidney Biopsies were performed in 13% of Australian kidneys and 22% of New Zealand kidneys at the time of organ retrieval. As a result, kidneys from six donors were not transplanted.

Figure 48

Reasons Kidneys were Unusable 1996 - 2000

		1996	1997	1998	1999	2000
Australia	Renal disease in donor	9	4	7	3	10
	Infection in donor	3	1	0	0	0
	Cancer in donor	0	0	0	0	2
	Anatomical	6	3	1	1	0
	Surgical	1	1	0	2	2
	Trauma	0	0	0	1	2
	No suitable recipient	1	0	0	0	0
	High Creatinine and Urea	0	0	0	2	0
	Unknown	1	0	0	0	0
	Total	21	9	8	9	16
New Zealand	Renal Disease in Donor	0	0	5	3	6
	Infection in Donor	0	0	2	0	0
	Surgical	1	1	0	0	1
	Trauma	0	0	0	1	0
	Donor Unstable	0	0	0	1	0
	Total	1	1	7	5	7

Figure 49

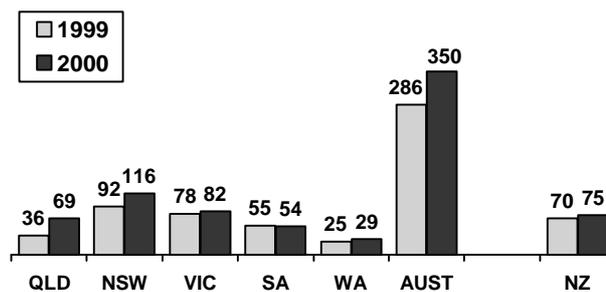
Donor Age of Unusable Kidneys 1996 - 2000

Year		00-04	05-14	15-24	25-34	35-44	45-54	55-64	65-74	Total
Australia *	1996	2	0	0	0	1	0	7	5	15
	1997	0	0	0	0	0	1	3	3	7
	1998	0	0	1	0	2	1	0	2	6
	1999	0	0	0	0	2	2	2	1	7
	2000	0	0	1	0	1	1	5	2	10
New Zealand *	1996	0	0	0	0	0	1	0	0	1
	1997	0	0	0	0	0	1	0	0	1
	1998	0	0	0	1	0	1	2	0	4
	1999	1	0	0	0	1	1	0	0	3
	2000	0	1	0	1	1	0	3	0	6

* Actual Donors

Figure 50

Cadaver Kidney Transplants 1999 - 2000
Australian States - New Zealand



DONOR KIDNEY FUNCTION

Terminal Levels of Serum Creatinine and Urea

In 2000, 11% of Australian donors had a terminal serum creatinine of > 125 $\mu\text{mol/L}$ and 13% had a terminal serum urea of > 9 mmol/L.

New Zealand had 6% of donors with a terminal serum creatinine of > 125 $\mu\text{mol/L}$ and 2% with terminal serum urea of > 9 mmol/L.

Figure 51

Terminal Serum Creatinine Levels 1996 - 2000

Creatinine Levels	Australia					New Zealand				
	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000
00-99	63%	69%	72%	67%	77%	85%	67.5%	73%	76%	79%
100-124	22%	19%	19%	16%	11%	9%	22.5%	23%	19%	15%
125-149	7%	4%	6%	6%	3%	3%	5%	2%	0%	0%
150-174	5%	4%	2%	5%	4%	0%	2.5%	0%	5%	3%
175-199	1%	2%	<1%	3%	1%	3%	0%	2%	0%	3%
200-224	1%	1%	<1%	<1%	0%	0%	2.5%	0%	0%	0%
225-249	<1%	<1%	0%	0%	<1%	0%	0%	0%	0%	0%
> 250	0%	1%	0%	3%	3%	0%	0%	0%	0%	0%

Figure 52

Terminal Serum Urea Levels 1996 - 2000

Urea Levels	Australia					New Zealand				
	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000
00-04	48%	49%	48%	49%	54%	47%	39%	41%	54%	54%
05-08	38%	38%	46%	42%	34%	47%	53%	49%	35%	44%
09-12	10%	10%	5%	5%	7%	3%	5%	10%	11%	2%
13-16	2%	2%	1%	1%	3%	3%	0%	0%	0%	0%
> 16	2%	1%	0%	3%	2%	0%	3%	0%	0%	0%

SPECIAL SECTION

DONOR FACTORS AFFECTING PRIMARY CADAVERIC RENAL GRAFT SURVIVAL

Data derived from the ANZDATA Registry - Graeme R. Russ

Figure 53

Primary Cadaveric Renal Allograft Survival According to Donor Age

Kidneys from donors aged between 10 and 49 years of age had a significantly better graft survival after transplantation compared to kidneys from donors of older age groups. This difference was seen as early as three months post transplant and differences increased with increasing time post transplant. After five years post transplant, donors over the age of 60 years had the worst graft survival.

Primary Cadaver Graft Survival 1994 - 1999 According to Donor Age

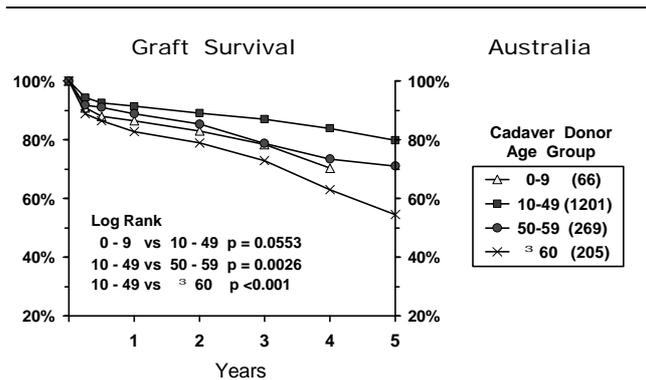


Figure 54

Organ Donor Age and Early Non-Function

The incidence of grafts never functioning increases with increasing donor age and is eight percent from donors over 65 years. In addition, the incidence of delayed function (dialysis requirements after transplant) also increases with age and is more common in recipients of older donors.

Organ Donor Age and Early Non-Function Primary Cadaver Grafts 1994 - 1999

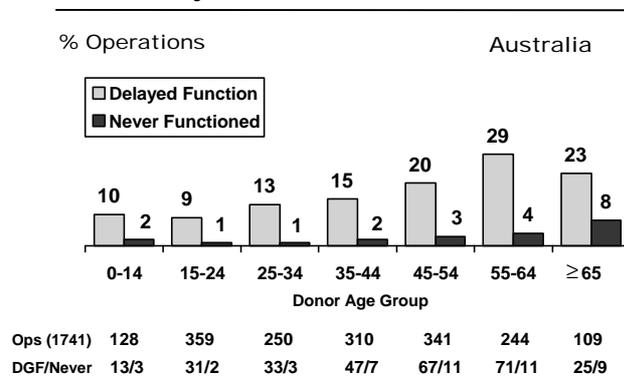


Figure 55

Primary Renal Allograft Survival According to Cause of Donor Death

Kidneys from donors who died from cerebrovascular disease had a significantly inferior graft survival compared to kidneys from donors dying from trauma.

Primary Cadaver Graft Survival 1994 - 1999 According to Cause of Donor Death

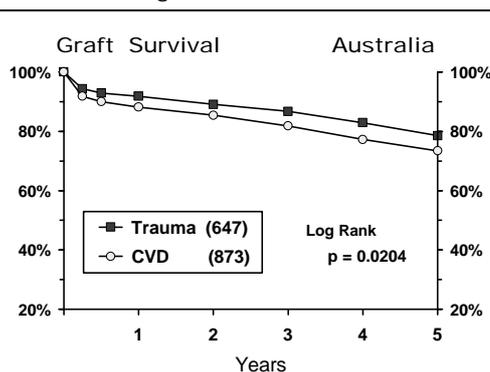


Figure 56

Primary Cadaver Graft Survival 1994 - 1999
According to Cause of Donor Gender

Primary Renal Allograft Survival According to Donor Gender

There is no difference in graft survival between female and male donors.

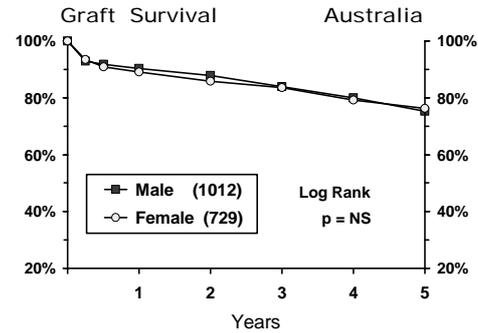


Figure 57

Primary Cadaver Graft Survival 1994 - 1999
According to Donor Gender and Cause of Death

Primary Cadaveric Renal Graft Survival Related to Donor Death and Gender

Male donor kidneys with death from trauma have a better outcome than those from female donors dying from CVD.

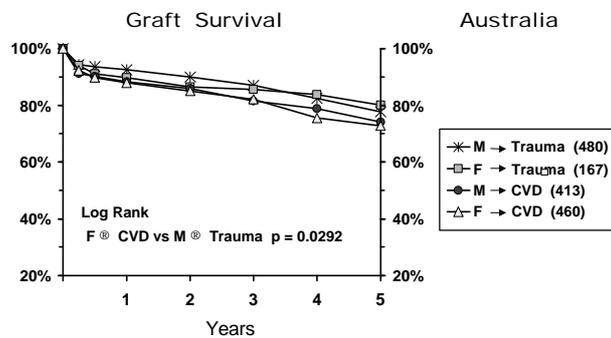


Figure 58

Primary Cadaver Graft Survival 1994 - 1999
According to Total Ischaemia (Hours)

Primary Cadaveric Renal Graft Survival Related to Hours of Ischaemia

Prolonged total ischaemia beyond 18 hours is associated with statistically inferior graft survival in the long term.

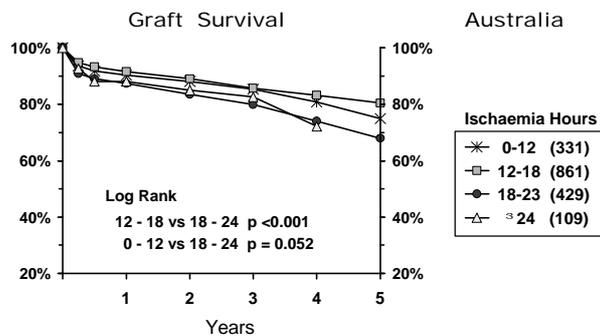
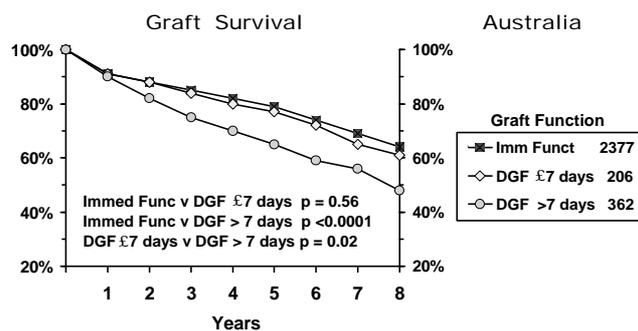


Figure 59

Primary Cadaver Graft Survival 1990 - 1999
According to Delayed Graft Function
Excluding Grafts Never Functioning

Primary Cadaveric Renal Graft Survival Related to the Presence of Delayed Graft Function

The length of dialysis dependence in grafts with delayed function is the major determinant of poorer outcome. Dialysis requirement for more than seven days leads to a significantly poorer outcome, whereas delayed function lasting less than seven days does not impact negatively on outcome compared to grafts with immediate function.



LIVER DONATION

There were 181 liver transplants performed in 2000, 148 in Australia and 33 in New Zealand.

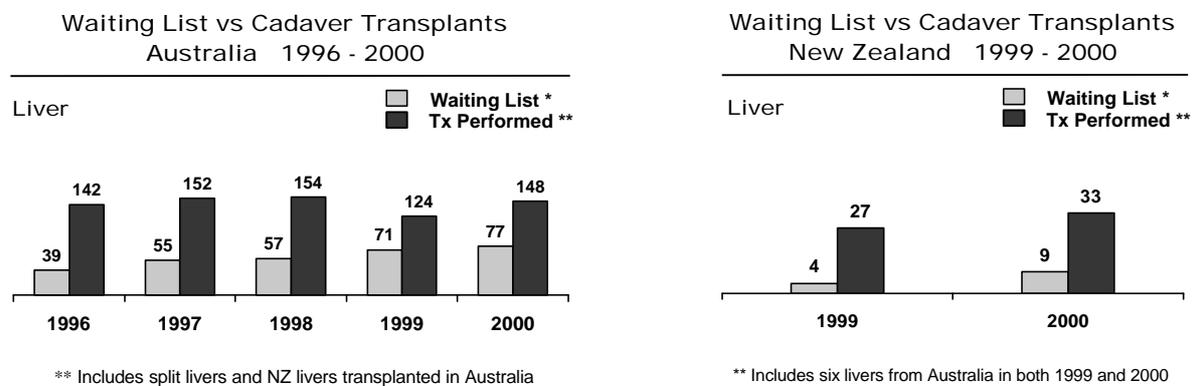
Six livers were donated from Australia and transplanted into New Zealand recipients and seven livers donated from New Zealand were transplanted into Australian recipients.

There were 142 Australian donors, who provided

147 recipients with transplanted livers and 34 New Zealand donors provided livers for 34 recipients.

Ten transplants were performed using the “split” liver technique (nine at the Princess Alexandra Hospital, Queensland and one at the New Children’s Hospital in New South Wales).

Figure 60



* Data as at 30-Jun-1996 ACCORD Newsletter 14, published Jul-96
 Data as at 30-Jun-1997 ACCORD Newsletter 17, published Aug-97
 Data as at 31-Dec-1998 Australians Donate
 Data as at Feb-2000 Individual Transplant Units and the National Organ Matching System
 Data as at Jan-2001 Individual Transplant Units and the National Organ Matching System

* Source of waiting list - NZ Donor Coordinators

Figure 61

Age of Liver Donors 1996 - 2000

	Year	00-04	05-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	Total
Australia	1996	3	8	25(5+)	20	25(2+)	23(+)	7	0	0	111
	1997	3	7	29(+)	15(+)	24(3+)	33	12	2	0	125
	1998	3	9	32 (3+)	15(+)	21(+)	23(+)	22(+)	7	0	132
	1999	6	10(+)	22(+)	16(+)	16 (2+)	22 (2+)*	20	4	0	116
	2000	2	7	26 (+)	22	25 (+)	31 (2+)	21	7 (+)	1	142
New Zealand	1996	0	1	10	1	1	6	4	0	0	23
	1997	0	4	8	3	1	3	3	0	0	22
	1998	1	2	5	5	7	6	4	0	0	30
	1999	0	2	2	4	4	10	3	3	0	28
	2000	0	1	8	4	5	11	4	1	0	34

+ One liver transplanted into two recipients

* One liver split and used for one patient only

Figure 62

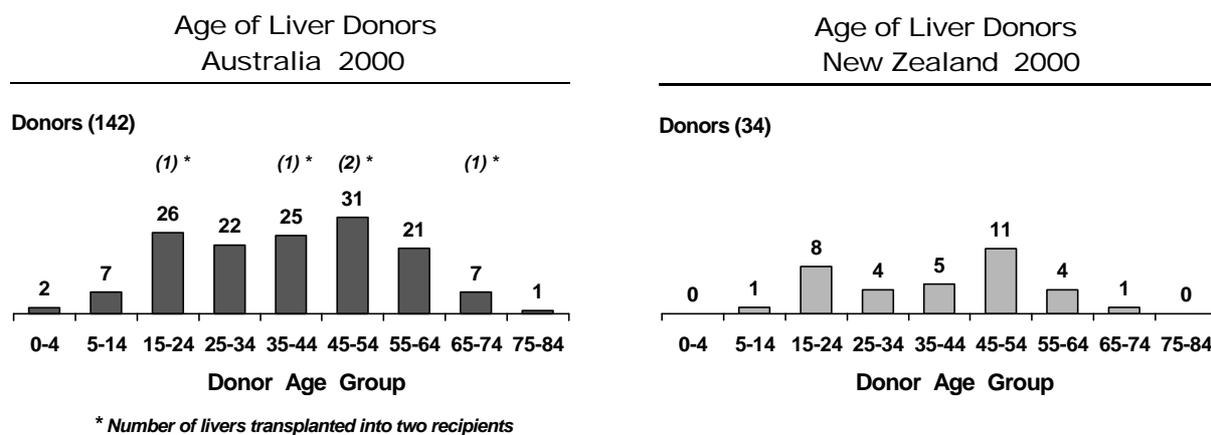


Figure 63

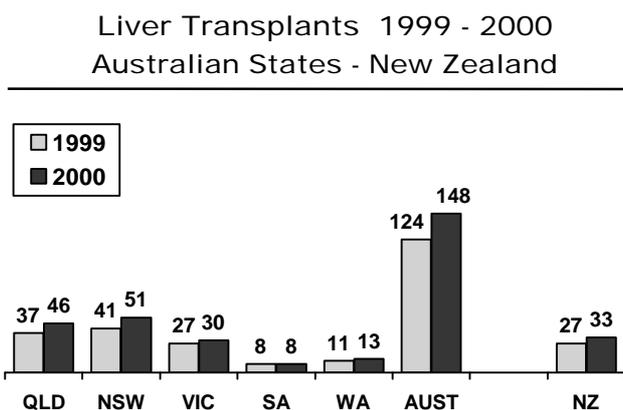


Figure 64

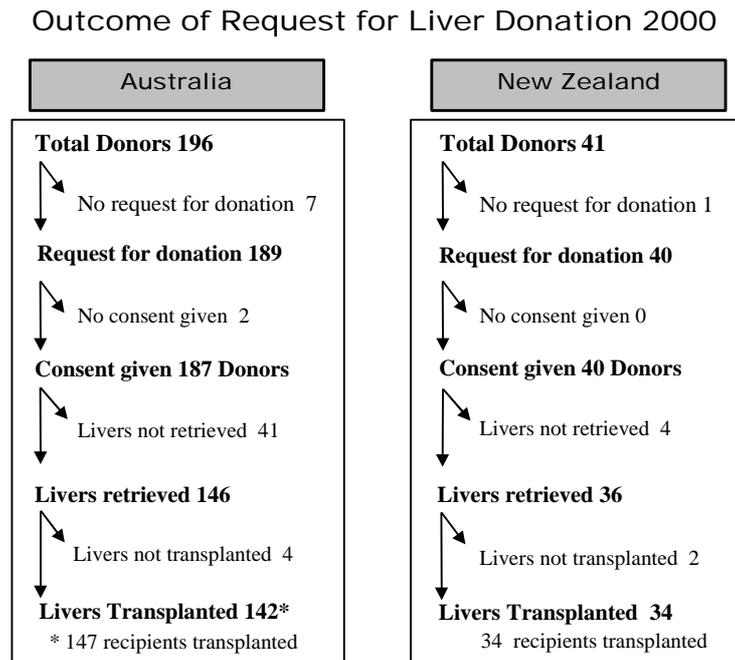
Regional Outcome of Requests for Liver Donation 1989-2000

	Qld	NSW	ACT	Vic.	Tas.	SA	NT	WA	Aust.	N.Z.**
Total Donors	472	795	46	530	39	295	25	185	2387	308
Requested	464	712	44	460	33	252	21	154	2140	253
Consented	456	692	42	440	31	242	21	147	2071	251
Retrieved	341	460	32	292	24	172	14	97	1432	204
Transplanted *	358	453	32	255	22	166	14	95	1395	195

* Refers to number of recipients - use of split livers

** New Zealand 1993 - 2000

Figure 65



* Includes split livers and number of recipients

Recipients transplanted refers to outcome of livers donated in Australia or New Zealand

Refer to Appendices for reasons livers were not requested, not retrieved and not transplanted

PERFUSION OF LIVERS

Australia

University of Wisconsin (UW) solution was used as the final perfusion for all livers. The initial flush solution was either Hartman's or Ross Solution. There were 20 livers solely perfused with UW.

New Zealand

University of Wisconsin solution was used for all livers retrieved.

DONOR LIVER FUNCTION

The results of the serum tests for liver function for 146 Australian and 36 New Zealand donors in 2000, who had livers retrieved, is shown below.

Sixty eight percent of Australian and 28% of New Zealand donors had all five tests performed.

Figure 60 shows the number of donors whose liver function was above the normal range.

Figure 66

Number of Donors with Liver Function Tests above Normal Range

Liver Function Tests	Australia			New Zealand		
	Donors with value recorded *	Above Normal	Maximum recorded 1989-2000	Donors with value recorded *	Above Normal	Maximum recorded 1989-2000
Alanine Transaminase ALT > 40 u/L	144	46 (32%)	1194 (344)x	25	10 (40%)	208 (194)x
Aspartate Transaminase AST > 40 u/L	107	53 (50%)	1008 (539)	23	12 (52%)	428 (268)
Gamma Glutamyl Transferase GGT > 60 u/L	135	19 (14%)	750 (239)	21	1 (5%)	106 (55)
Alkaline Phosphatase > 116 u/L	138	9 (7%)	309 (226)	36	0 (0%)	264 (109)
Total Bilirubin > 20 umol/L	144	28 (19%)	103 (54)	36	0 (0%)	57 (19)

* Not all donors have all tests

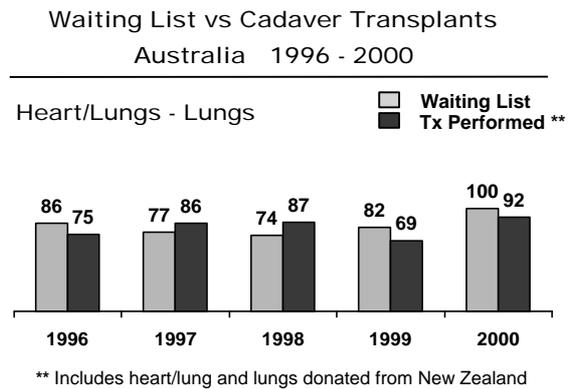
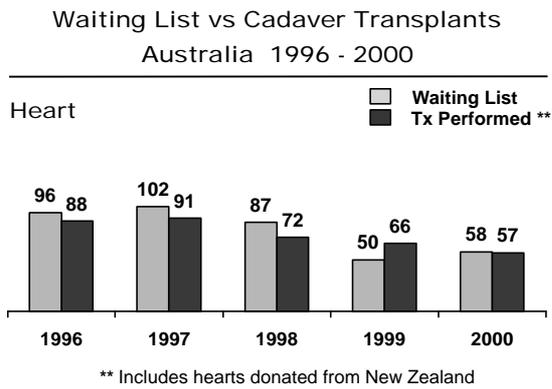
x (2000) Maximum

HEART DONATION

Australia performed 57 heart transplants, two heart/lung, 65 double and 25 single lung transplants.

New Zealand performed 13 heart transplants, ten double lung and two single lung transplants.

Figure 67



* Data as at 30-Jun-1996 ACCORD Newsletter 14, published Jul-96
 Data as at 30-Jun-1997 ACCORD Newsletter 17, published Aug-97
 Data as at 31-Dec-1998 Australians Donate
 Data as at Feb-2000 Individual Transplant Units and the National Organ Matching System
 Data as at Jan-2001 Individual Transplant Units and the National Organ Matching System

Figure 68

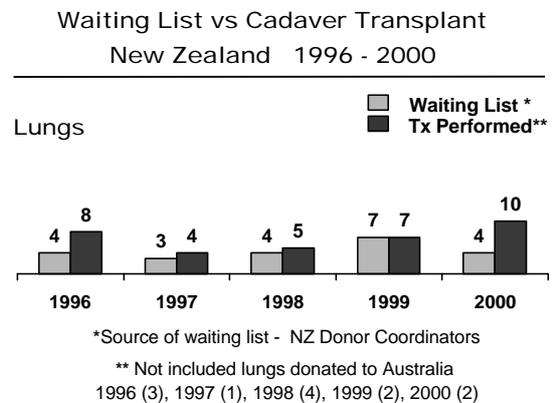
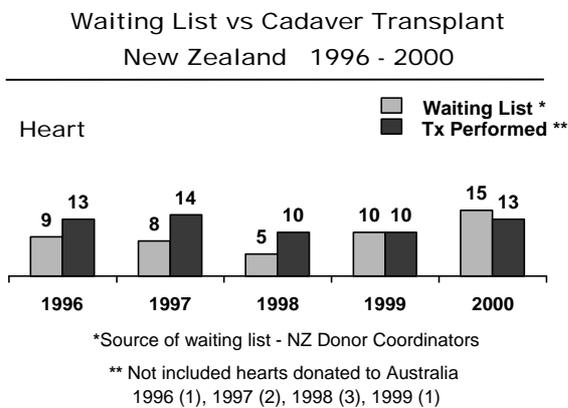


Figure 69

Age of Heart Donors 1996 - 2000

	Year	00-04	05-14	15-24	25-34	35-44	45-54	55-64	65-74	Total
Australia	1996	1	3	22	21	22	24	1	0	94
	1997	0	3	20	17	21	29	3	0	93
	1998	2	3	24	14	18	10	2	0	73
	1999	1	4	20	10	8	17	7	0	67
	2000	0	1	17	15	11	12	3	0	59
New Zealand	1996	0	0	6	1	2	5	0	0	14
	1997	0	0	10	3	0	3	0	0	16
	1998	0	0	2	3	5	2	1	0	13
	1999	0	0	1	3	1	6	0	0	11
	2000	0	0	4	4	2	3	0	0	13

Figure 70

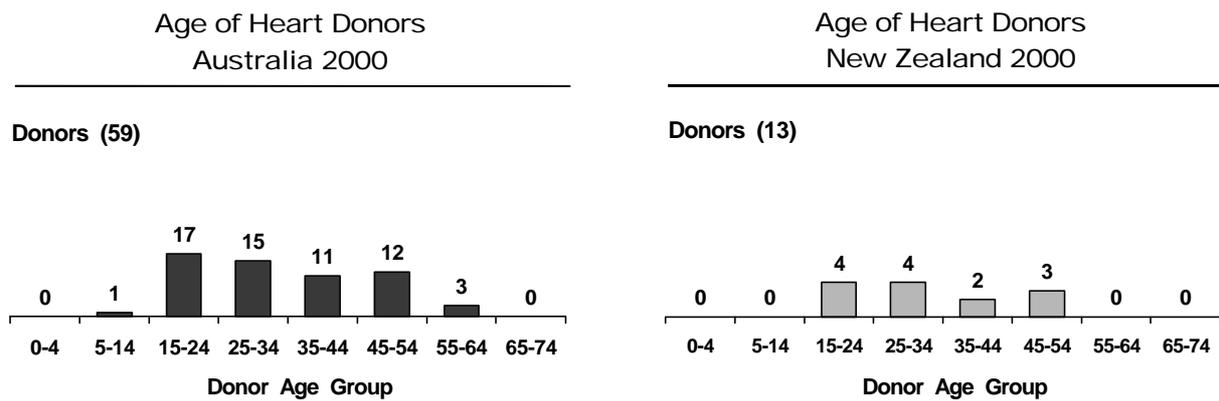


Figure 71

Heart Transplants 1999 - 2000
Australian States - New Zealand

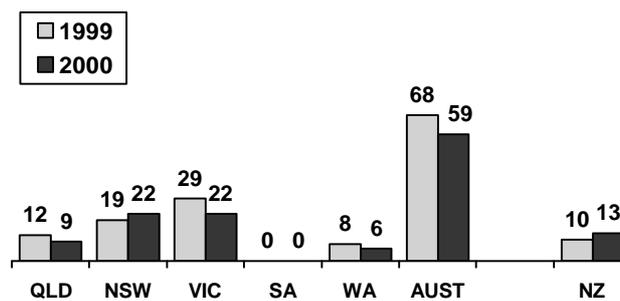


Figure 72

Heart and Lung Transplant Recipients
By Transplant Country 1996 - 2000

	Heart/Lung	1996	1997	1998	1999	2000
Australia	Heart	87	90	69	66	57
	Heart/lung	7	3	4	2	2
	Double lung	37	44	49	42	65
	Single left lung	12	20	17	13	12
	Single right lung	16	18	17	12	13
	Total	159	175	156	135	149
New Zealand	Heart	14	15	13	10	13
	Heart/lung	0	1	0	0	0
	Double lung	7	1	6	7	10
	Single left lung	3	1	1	0	0
	Single right lung	1	2	2	0	2
	Total	25	20	22	17	25

Figure 73

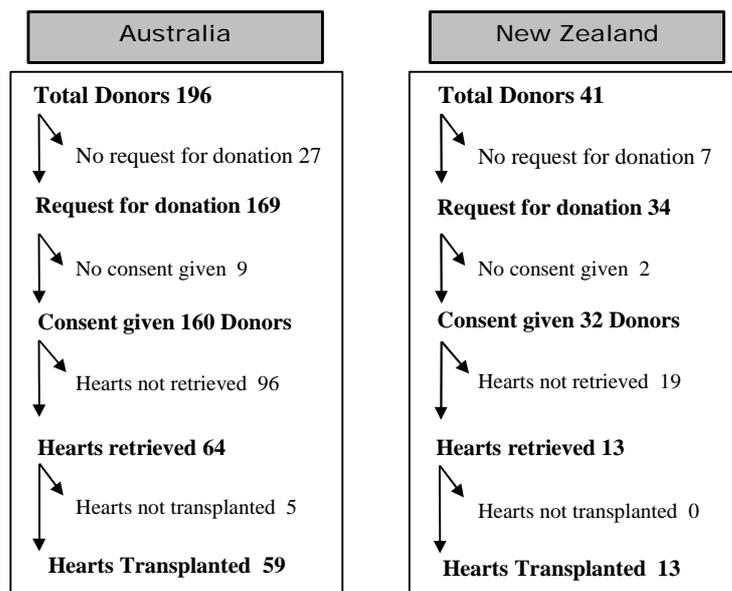
Regional Outcome of Requests for Heart Donation 1989 - 2000

	Qld	NSW	ACT	Vic.	Tas.	SA	NT	WA	Aust.	N.Z. *
Total Donors	472	795	46	530	39	295	25	185	2387	308
Requested	446	671	43	444	33	231	21	137	2026	242
Consented	423	631	39	415	32	223	20	121	1904	233
Retrieved	240	392	30	265	24	128	10	70	1159	97
Transplanted	238	390	29	257	23	125	10	67	1139	97

* New Zealand 1993 - 2000

Figure 74

Outcome of Request for Heart Donation 2000



Refer to Appendices for reasons hearts were not requested, not retrieved and not transplanted.

HEART VALVE DONATION

Figure 75

Age of Heart Valve Donors 1996 - 2000

	Year	00-04	05-14	15-24	25-34	35-44	45-54	55-64	65-74	Total
Australia	1996	1	4	5	6	7	1	2	0	26
	1997	2	4	7	2	7	7	4	0	33
	1998	0	4	6	4	9	10	4	0	37
	1999	3	3	2	6	6	9	4	0	33
	2000	0	4	6	4	14	17	8	0	53
New Zealand	1996	0	2	6	2	1	2	3	0	16
	1997	0	3	3	0	3	4	4	0	17
	1998	1	2	5	1	2	4	3	0	18
	1999	1	3	2	1	3	5	4	0	19
	2000	0	1	3	0	3	8	4	0	19

Figure 76

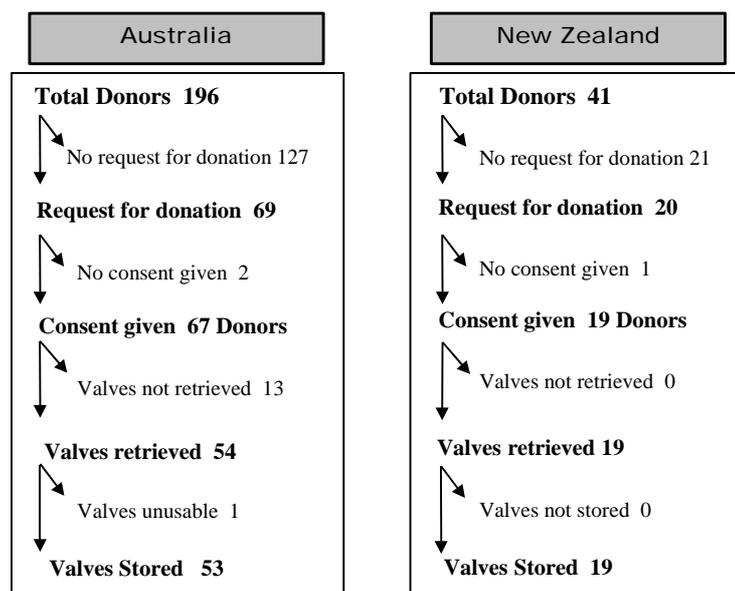
Regional Outcome of Requests for Heart Valve Donation 1989 - 2000

	Qld	NSW	ACT	Vic.	Tas.	SA	NT	WA	Aust.	N.Z. *
Total Donors	472	795	46	530	39	295	25	185	2387	308
Requested	154	122	6	45	2	48	1	40	418	132
Consented	154	122	5	45	2	48	1	39	416	130
Retrieved	143	112	5	41	2	45	1	37	386	128
Transplanted or Stored	142	105	5	40	2	44	1	37	376	127

* New Zealand 1993 - 2000

Figure 77

Outcome of Request for Heart Valve Donation 2000



LUNG DONATION

Figure 78

Age of Lung Donors 1996 - 2000

	Year	00-04	05-14	15-24	25-34	35-44	45-54	55-64	65-74	Total
Australia	1996	0	5	14	12	18	17	0	0	66
	1997	0	3	18	9	12	23	4	0	69
	1998	0	2	19	13	19	15	2	0	70
	1999	0	2	10	12	7	18	11	0	60
	2000	0	2	19	14	16	17	11	0	79
New Zealand	1996	0	0	3	0	1	5	1	0	10
	1997	0	1	2	0	1	1	0	0	5
	1998	0	0	1	1	2	2	2	0	8
	1999	0	0	0	0	2	5	1	0	8
	2000	0	0	2	2	2	8	0	0	14

Figure 79

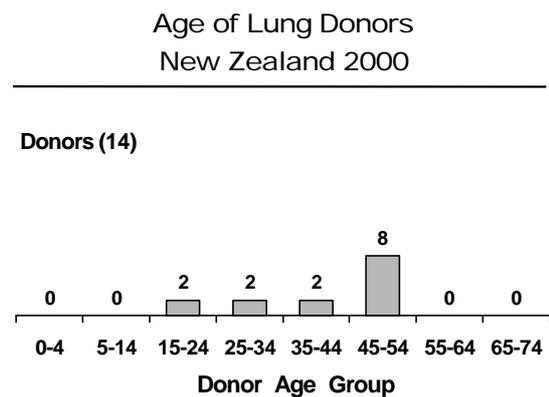
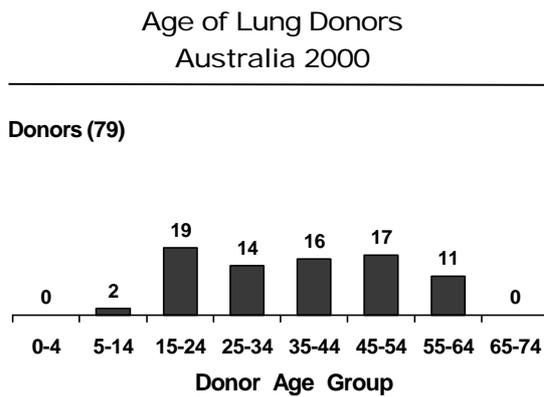
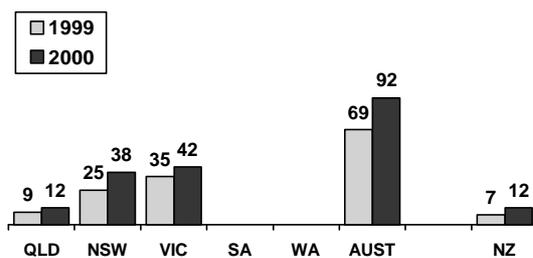


Figure 80

Lung Transplant Recipients 1999 - 2000
Australian States - New Zealand



Single and Bilateral Sequential Lung Transplants by State 1999 - 2000

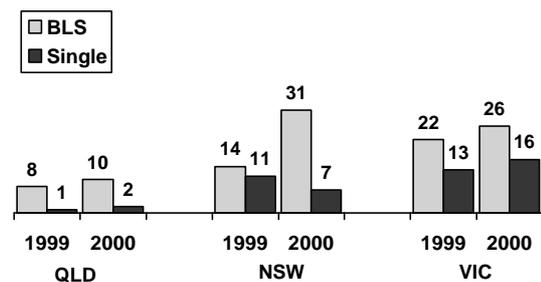


Figure 81

Regional Outcome of Requests for Lung Donation 1989 - 2000

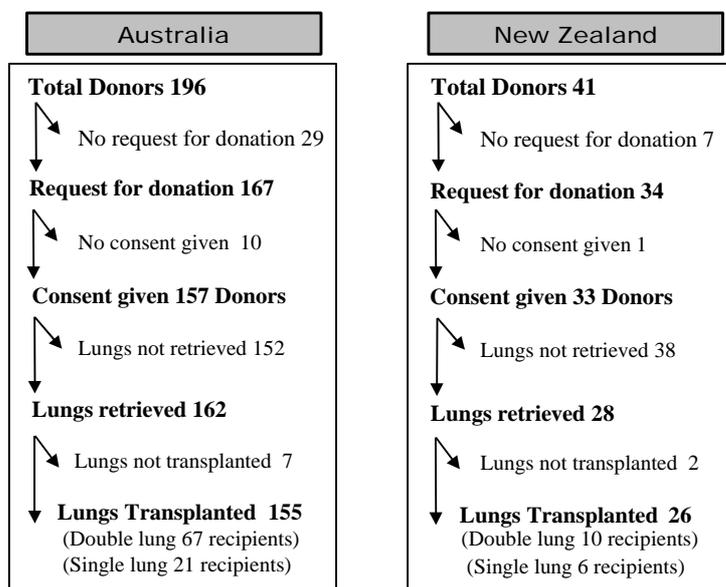
	Qld	NSW	ACT	Vic.	Tas.	SA	NT	WA	Aust.	N.Z.**
Total Donors	472	795	46	530	39	295	25	185	2387	308
Requested	416	631	43	394	29	192	19	106	1830	184
Consented	386	588	39	366	28	183	18	97	1705	180
Retrieved x	214	451	31	292	28	166	22	82	1286	116
Transplanted x	195	431	30	271	28	156	21	80	1212	103

x Number of Lungs

** New Zealand 1993 -2000

Figure 82

Outcome of Request for Lung Donation 2000



Refer to Appendices for reasons lungs were not requested, not retrieved and not transplanted.

DONOR LUNG FUNCTION

Australia

The arterial blood gases were taken on 100% FiO₂ and PEEP of 5 cm. Five donors had a PEEP >5 cm. The results from 74 lung donors are available for 2000 and show 23% (17) to be acidotic (pH < 7.36) and 24% (18) to be alkalotic (pH > 7.44).

Oxygenation measured as PaO₂ ranged from 280-622 mmHg with a median of 483 mmHg.

PaCO₂ ranged from 24.0-55.7 mmHg with a median of 38.0 mmHg.

New Zealand

The arterial blood gas results from 14 lung donors in 2000 shows 21% (3) to be acidotic (pH < 7.36) and 29% (4) to be alkalotic (pH > 7.44).

Oxygenation measured as PaO₂ ranged from 357-612 mmHg with a median of 466 mmHg.

PaCO₂ ranged from 28.0-50.0 mmHg with a median of 36.2 mmHg.

PANCREAS DONATION

There were 25 combined kidney/pancreas transplants performed in 2000, 17 at Westmead Hospital, NSW and eight at Monash Medical Centre in Victoria.

The first combined kidney/pancreas transplant was performed in New Zealand in August 1998, two in 1999 and three in 2000.

One pancreas only transplant was performed at Westmead Hospital.

Figure 83

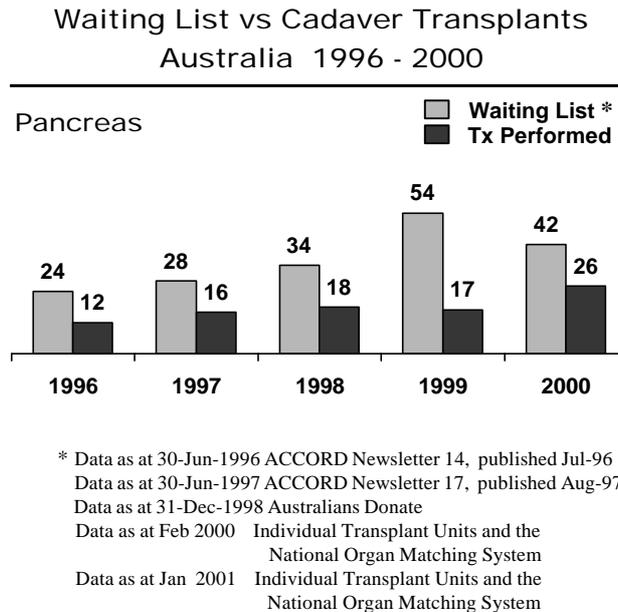


Figure 84

Waiting List September 2000

Numbers of Patients on Waiting List	Aust.	N.Z.
* Number of Patients with Diabetes Type 1 on dialysis (Sept.2000)	224	50
Patient < 45 years of age	100	29
Patient < 55 years of age	184	44
Number of Patients on Kidney Transplant Waiting List	1487	315
Number of Patients on Kidney Pancreas Transplant Waiting List	42	4

Reference: * ANZDATA Registry

Figure 85

Donor Age for Transplanted Pancreas Australia 1996 - 2000

Year	00-04	05-14	15-24	25-34	35-44	45-54	55-64	Total
1996	0	2	3	4	3	0	0	12
1997	0	2	8	5	1	0	0	16
1998	0	2	9	5	2	0	0	18
1999	0	2	8	3	3	1	0	17
2000	0	0	9	9	6	2	0	26

Figure 86

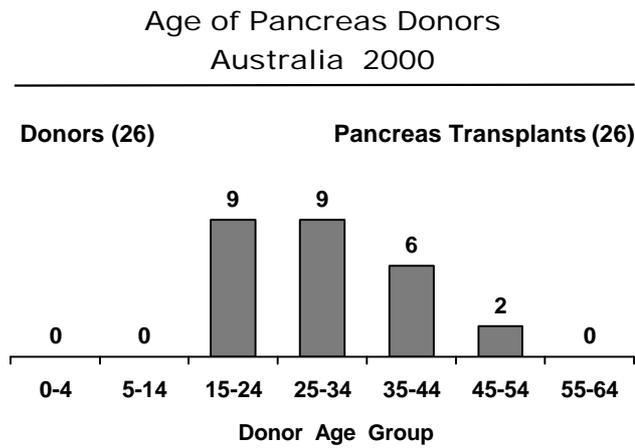


Figure 87

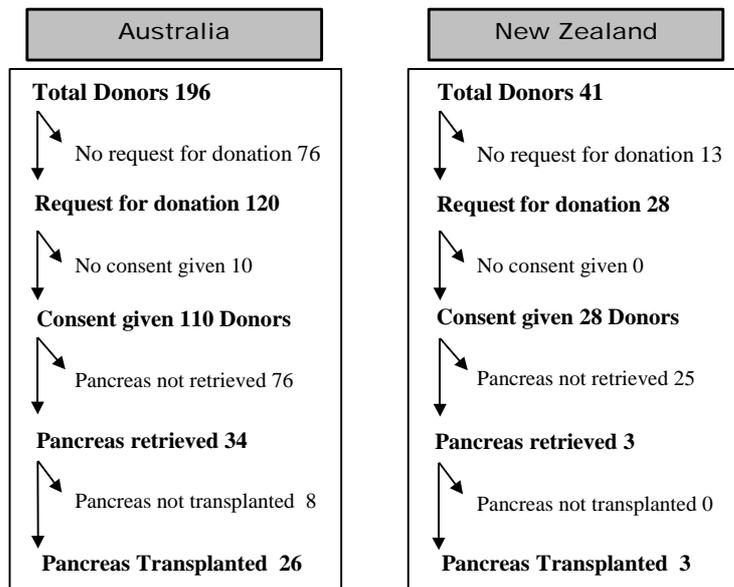
Regional Outcome of Requests for Pancreas Donation 1989 - 2000

	Qld	NSW	ACT	Vic.	Tas.	SA	NT	WA	Aust.	N.Z.**
Total Donors	472	795	46	530	39	295	25	185	2387	308
Requested	382	601	43	256	12	75	4	39	1412	97
Consented	330	564	39	229	10	56	4	32	1264	92
Retrieved	11	139	9	80	2	15	0	24	280	15
Transplanted	9	103	6	34	2	8	0	0	162	6

** New Zealand 1993 -2000

Figure 88

Outcome of Request for Pancreas Donation 2000



Refer to Appendices for reasons pancreas were not requested, not retrieved and not transplanted.

CORNEAL DONATION

This section refers only to corneas donated from solid organ donors. It does not include any cases of cornea only donation. Full data is available from

The Australian Corneal Graft Registry
(Editors K.A. Williams, S.M. Muehlberg, R.F. Lewis and D.J. Coster), Flinders Medical Centre, Bedford Park 5042, South Australia.

Figure 89

Age of Corneal Donors 1996 - 2000

	Year	00-04	05-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	Total
Australia	1996	0	4	18	11	21	21	18	6	0	99
	1997	2	2	15	8	20	26	10	7	2	92
	1998	0	4	9	11	18	27	16	10	0	95
	1999	0	3	10	13	12	19	24	7	2	90
	2000	0	2	10	10	14	21	23	8	1	89
New Zealand	1996	0	0	3	0	1	4	3	0	0	11
	1997	0	2	4	4	0	4	2	0	0	16
	1998	0	2	1	3	3	3	2	0	0	14
	1999	0	0	0	1	2	2	2	1	0	8
	2000	0	0	1	0	1	8	0	1	0	11

Figure 90

Regional Outcome of Requests for Corneal Donation 1989 - 2000

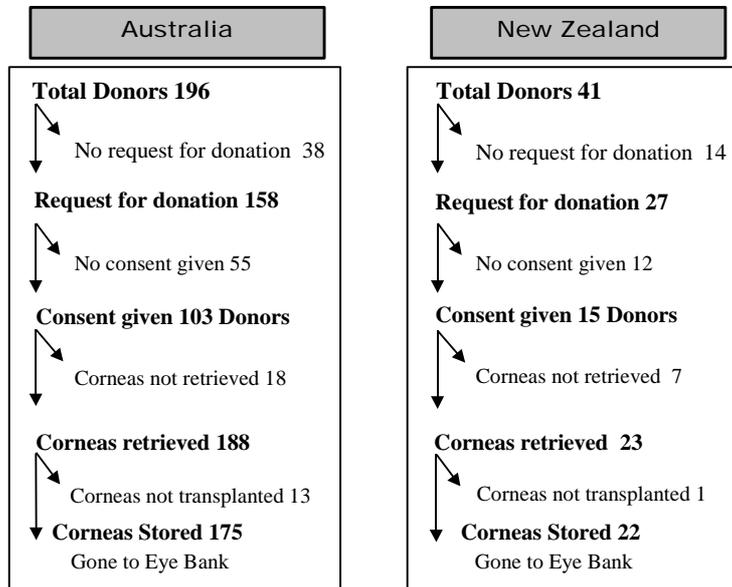
	Qld	NSW	ACT	Vic.	Tas.	SA	NT	WA	Aust.	N.Z.**
Total Donors	472	795	46	530	39	295	25	185	2387	308
Requested	435	700	41	475	24	210	8	151	2044	176
Consented	328	522	26	360	16	124	5	98	1479	130
Retrieved x	487	994	46	706	32	230	2	188	2685	212
Gone to Eye Bank xx	479	766	37	687	29	222	2	179	2401	209

x Number of Corneas xx Gone to Eye Bank - Transplanted later

** New Zealand 1993 -2000

Figure 91

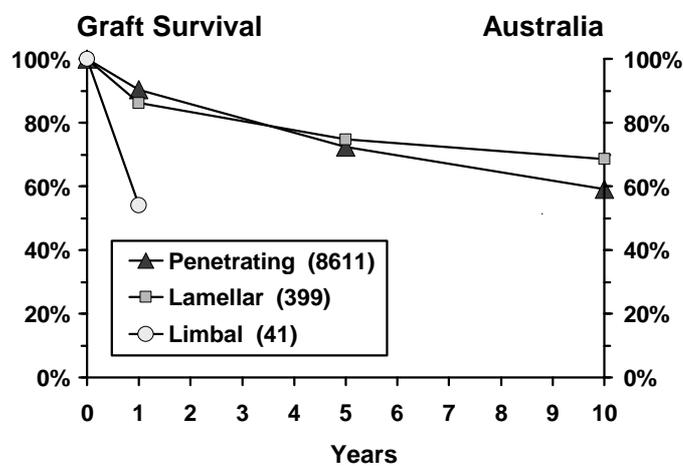
Outcome of Request for Corneal Donation 2000



Refer to Appendices for reasons cornea were not requested, not retrieved and not transplanted.

Figure 92

Graft Survival of Penetrating, Lamellar and Limbal Corneal Grafts



Source: Australian Corneal Graft Registry

BONE DONATION

There were 16 bone donations from the solid organs in Australia and two from New Zealand in 2000.

Figure 93

Age of Bone Donors 1996 - 2000

	Year	00-04	05-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	Total
Australia	1996	0	0	6	0	1	8	0	0	0	15
	1997	0	1	1	2	4	6	1	1	0	16
	1998	0	0	5	2	3	6	3	1	0	20
	1999	0	0	2	2	2	4	4	1	0	15
	2000	0	0	0	1	3	8	3	0	1	16
New Zealand	1996	0	0	0	0	2	4	0	0	0	6
	1997	0	0	2	1	1	1	1	0	0	6
	1998	0	0	0	1	0	1	0	0	0	2
	1999	0	0	0	0	0	0	0	0	0	0
	2000	0	1	0	0	0	1	0	0	0	2

Figure 94

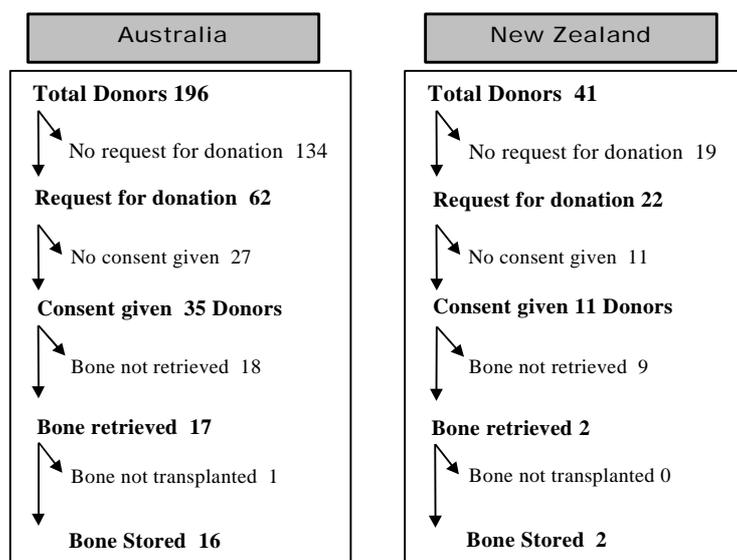
Regional Outcome of Bone Donation 1989 - 2000

	Qld	NSW	ACT	Vic.	Tas.	SA	NT	WA	Aust.	N.Z.**
Total Donors	472	795	46	530	39	295	25	185	2387	308
Requested	360	65	4	41	3	133	2	89	697	104
Consented	267	50	4	35	2	57	2	57	474	76
Retrieved	95	8	0	8	2	41	0	39	193	32
Transplanted or Stored	93	8	0	2	2	41	0	38	184	32

* New Zealand 1993 -2000

Figure 95

Outcome of Request for Bone Donation 2000



Refer to Appendices for reasons bones were not requested, not retrieved and not transplanted.

TERMINAL MANAGEMENT

Time from Admission to Brain Death

Australia

There has been an increase in the median time from admission to brain death, from 33 hours in 1999 to 43 hours in 2000.

Fifteen percent of donors were in hospital for more than five days.

New Zealand

Forty two percent of donors were certified brain dead within 24 hours of hospital admission.

This is similar to last year (41% in 1999 and 46% in 1998). Five percent were in hospital for more than five days, compared to 13% in 1999.

Figure 96

Time from Admission to Brain Death 1996 - 2000

	Year	Hours								Unknown	Median (hours)	No. of Donors
		0-23	24-47	48-71	72-95	96-119	120-143	144-167	>168			
Australia	1996	38%	30%	8%	8%	4%	0%	3%	7%	2%	32	194
	1997	38%	28%	13%	4%	3%	2%	1%	6%	5%	28	190
	1998	29%	25%	14%	10%	4%	3%	2%	9%	4%	39	196
	1999	38%	26%	13%	5%	6%	2%	2%	7%	1%	33	164
	2000	24%	31%	13%	11%	6%	4%	2%	9%	0%	43	196
New Zealand	1996	38%	14%	8%	11%	6%	8%	3%	9%	3%	37	36
	1997	55%	17%	9%	5%	2%	5%	0%	2%	5%	21	42
	1998	46%	33%	7%	4%	2%	0%	2%	6%	0%	25	46
	1999	41%	31%	8%	5%	2%	5%	0%	8%	0%	25	39
	2000	42%	24%	12%	10%	7%	0%	0%	5%	0%	28.5	41

Figure 97

Australian States Time from Admission to Brain Death 2000

States	Hours								Median (hours)	No. of Donors
	0-23	24-47	48-71	72-95	96-119	120-143	144-167	> 168		
Queensland	22%	27%	19%	16%	0%	3%	0%	13%	49.7	37
New South Wales	29%	34%	9%	9%	4%	4%	0%	11%	41.0	55
ACT	40%	20%	0%	20%	0%	0%	0%	20%	39.8	5
Victoria	23%	30%	14%	9%	9%	4%	7%	4%	45.4	44
Tasmania	0%	100%	0%	0%	0%	0%	0%	0%	25.3	1
South Australia	24%	33%	17%	10%	13%	0%	0%	3%	40.2	30
Northern Territory	50%	0%	50%	0%	0%	0%	0%	0%	34.6	2
Western Australia	14%	32%	9%	14%	9%	9%	0%	13%	51.4	22

Figure 98

Time from Ventilation to Brain Death 1996 - 2000

	Year	Hours								Unknown	No. of Donors
		0-23	24-47	48-71	72-95	96-119	120-143	144-167	> 168		
Australia	1996	41%	28%	10%	7%	3%	1%	3%	5%	2%	194
	1997	43%	29%	12%	3%	3%	1%	<1%	5%	4%	190
	1998	36%	28%	11%	9%	3%	3%	1%	4%	5%	196
	1999	42%	28%	10%	6%	5%	2%	<1%	5%	1%	164
	2000	26%	35%	12%	11%	6%	4%	<1%	6%	0%	196
New Zealand	1996	50%	17%	8%	6%	3%	11%	0%	3%	3%	36
	1997	55%	17%	9%	5%	2%	5%	0%	2%	5%	42
	1998	52%	31%	9%	2%	0%	0%	2%	4%	0%	46
	1999	46%	33%	10%	5%	3%	0%	0%	3%	0%	39
	2000	49%	22%	10%	10%	7%	0%	0%	2%	0%	41

Time from Brain Death to Aortic Cross Clamp

Australia

Sixty three percent of donors had organs retrieved within 12 hours of the certification of brain death.

The median time 11.6 hours was similar to previous years.

New Zealand

Eighty eight percent of donor organs were retrieved within 12 hours.

The median time was 9.0 hours.

Figure 99

Time from Brain Death to Aortic Cross Clamp 1996 - 2000

Hours	Australia					New Zealand				
	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000
<= 6	15%	12%	10%	9%	10%	20%	32%	24%	36%	34%
7 - 12	58%	56%	59%	60%	53%	60%	46.5%	70%	54%	54%
13-18	25%	26%	25%	26%	31%	17%	12%	6%	2.5%	5%
19-24	1%	4%	2%	3%	2%	0	7.5%	0	5%	2%
> 24	1%	2%	4%	2%	4%	3%	2%	0	2.5%	5%
Median Hours	10.8	11.4	11.3	11.3	11.6	8.6	7.6	8.8	8.1	9.0
Number of Donors	192	187	194	163	195	35	41	46	39	41
Non-Heart Beating Donors	2	3	2	1	1	1	1	0	0	0

Figure 100

Australian States Time from Brain Death to Aortic Cross Clamp 2000

	Qld	NSW	ACT	Vic.	Tas	SA	NT	WA
<= 6 hours	3 (8%)	6 (11%)	0 (0%)	3 (7%)	1 (100%)	6 (20%)	0 (0%)	0 (0%)
7 - 12 hours	23 (62%)	32 (58%)	3 (60%)	23 (52%)	0 (0%)	12 (40%)	1 (100%)	10 (46%)
13-18 hours	10 (27%)	17 (31%)	2 (40%)	15 (34%)	0 (0%)	11 (37%)	0 (0%)	6 (27%)
19-24 hours	0 (0%)	0 (0%)	0 (0%)	1 (2%)	0 (0%)	1 (3%)	0 (0%)	2 (9%)
> 24 hours	1 (3%)	0 (0%)	0 (0%)	2 (5%)	0 (0%)	0 (0%)	0 (0%)	4 (18%)
Median Hours	10.43	11.67	10.08	12.18	6.67	10.72	8.22	14.60
Number of Donors	37	55	5	44	1	30	1	22

DONOR MAINTENANCE

Drugs for Maintenance of the Donor (given in the Intensive Care/Critical Care Unit)**Australia**

In 2000 there were 16 (8%) donors who did not require inotropic support.

There continues to be an increase in the use of noradrenaline as an inotropic agent.

Antidiuretic agents (desmopressin/vasopressin) were prescribed to 116 donors, 59% of all donors.

New Zealand

In 2000 there were seven (17%) donors who did not require inotropic support.

The main inotropic support agents were noradrenaline (56%) and dopamine (32%).

Antidiuretic agents were prescribed to 17 donors, 41% of all donors.

Figure 101

Donor Maintenance 1996 - 2000

Drugs	Australia					New Zealand				
	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000
Number of Donors	(194)	(190)	(196)	(164)	(196)	(36)	(42)	(46)	(39)	(41)
Dopamine	76	57	48	39	30	25	21	25	15	13
Adrenaline	70	55	71	47	52	1	6	3	7	2
Noradrenaline	53	75	70	80	126	14	16	18	26	23
Aramine	14	12	8	14	5	2	1	1	2	4
Dobutamine	9	9	4	3	5	0	1	0	0	0
Desmopressin/Vasopressin	120	117	142	118	116	27	32	34	26	17

NB: Donors may be given more than one drug

Figure 102

Australian States Donor Maintenance 2000 (1999)

	Qld	NSW	ACT	Vic.	Tas.	SA	NT	WA
Number of Donors	37 (20)	55 (48)	5 (2)	44 (42)	1 (6)	30 (30)	2 (3)	22 (13)
Dopamine	1 (7)	11 (11)	2 (0)	8 (16)	0 (3)	2 (2)	0 (0)	0 (0)
Adrenaline	15 (1)	6 (12)	2 (0)	6 (6)	0 (2)	20 (23)	0 (1)	3 (2)
Noradrenaline	20 (8)	37 (24)	4 (2)	35 (23)	0 (3)	10 (4)	1 (3)	19 (13)
Aramine	0 (1)	4 (7)	0 (0)	1 (5)	0 (0)	0 (1)	0 (0)	0 (0)
Dobutamine	1 (1)	0 (2)	0 (0)	1 (0)	0 (0)	0 (0)	0 (0)	3 (0)
Desmopressin/Vasopressin	25 (9)	36 (36)	2 (2)	26 (33)	1 (5)	15 (23)	1 (1)	10 (9)

NB: Donors may be given more than one drug

TERMINAL TREATMENT

Terminal Treatment (provided in the Operating Theatres)

Australia

There were four donors who received no heparin of which two donors received no form of terminal treatment.

New Zealand

All donors received terminal treatment in 2000. Methyl Prednisolone was given to one (2%) of New Zealand Donors compared to 179 (91%) of Australian Donors.

Figure 103

	Terminal Treatment 1996 - 2000									
	Australia					New Zealand				
	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000
Number of Donors	(194)	(190)	(196)	(164)	(196)	(36)	(42)	(46)	(39)	(41)
Heparin	186	188	194	158	192	34	38	42	37	41
Methyl Prednisolone	175	178	192	159	179	25	22	14	5	1
Chlorpromazine	36	33	40	29	34	11	12	0	1	0
Mannitol	30	28	40	20	23	5	3	2	0	0
Prostacyclin	68	67	74	61	82	10	5	8	4	7

NB: Donors may be given more than one drug

Figure 104

	Australian States Terminal Treatment 2000 (1999)							
	Qld	NSW	ACT	Vic.	Tas.	SA	NT	WA
Number of Donors	37 (20)	55 (48)	5 (2)	44 (42)	1 (6)	30 (30)	2 (3)	22 (13)
Heparin	37 (20)	54 (46)	5 (2)	44 (40)	1 (6)	29 (30)	1 (2)	21 (12)
Methyl Prednisolone	37 (18)	54 (46)	5 (2)	44 (42)	1 (6)	28 (30)	2 (3)	8 (12)
Chlorpromazine	23 (13)	1 (2)	1 (0)	4 (5)	0 (1)	4 (7)	0 (1)	1 (0)
Mannitol	7 (5)	1 (1)	0 (0)	0 (1)	0 (0)	15 (12)	0 (0)	0 (1)
Prostacyclin	12 (5)	30 (16)	3 (0)	22 (20)	0 (3)	9 (12)	0 (2)	6 (3)

NB: donors may be given more than one drug

