



SECTION 7

Deceased Donor Heart Donation

This section summarises heart donation activity from deceased donors in 2023, compared with previous years. The rate of hearts transplanted in 2023 was 4.5 pmp in Australia, and 3.1 pmp in New Zealand.

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EXECUTIVE SUMMARY

Every organ donor provides a precious opportunity for the chance of an improved quality of life and survival through transplantation. It is important to understand the donation and transplant outcomes including the specific organs consented for donation, the organs retrieved and whether they were transplanted or not (non-utilised). This section provides information about the outcomes for heart donation and transplantation from deceased actual organ donors.

SUGGESTED CITATION

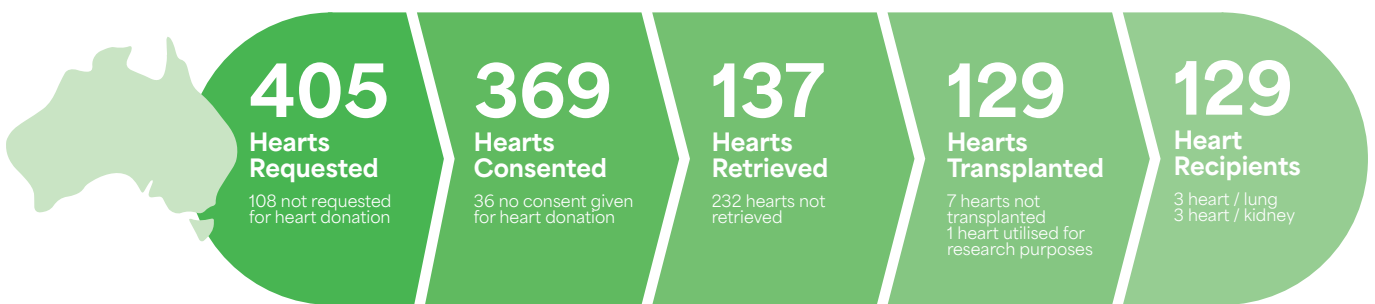
H Opdam, C Davies, K Marshall, G Irish 28th Report, Section 7: Deceased Donor Heart Donation. Australia and New Zealand Organ Donation Registry, Adelaide, Australia. 2024. Available at <https://www.anzdata.org.au/anzod/publications-2/annual-reports/>

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HEART DONATION

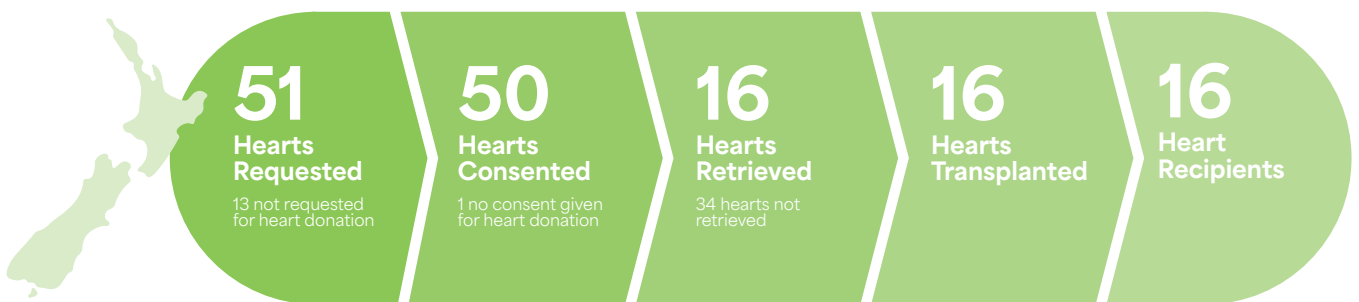
Of the 513 deceased actual organ donors in 2023 in Australia, 137 (26.7%) had the heart retrieved. From these heart donors, there were 129 heart transplant recipients (4.8 pmp). Of these 129 heart transplant recipients, 3 received heart/double lung transplants and 3 received a combined heart/kidney transplant. Figure 7.1.1 shows the outcomes of requests for heart donation in Australia for 2023.

Figure 7.1.1
Outcomes of requests for heart donation in Australia - 2023



In New Zealand, there were 50 donors (78.1%) who consented to heart donation. From these consented donors, 16 hearts were retrieved and 16 recipients received a heart transplant in 2023 (3.1 pmp). This was the same as the total number of heart transplants compared with 2022 (16). Figure 7.1.2 shows the outcomes of requests for heart donation in New Zealand for 2023.

Figure 7.1.2
Outcomes of requests for heart donation in New Zealand - 2023



Figures 7.2 and 7.3 show the number of hearts transplanted by donation pathway and the number of heart recipients by jurisdiction.

Figure 7.2.1
Hearts Transplanted by Donation Pathway
Australia 1998-2023

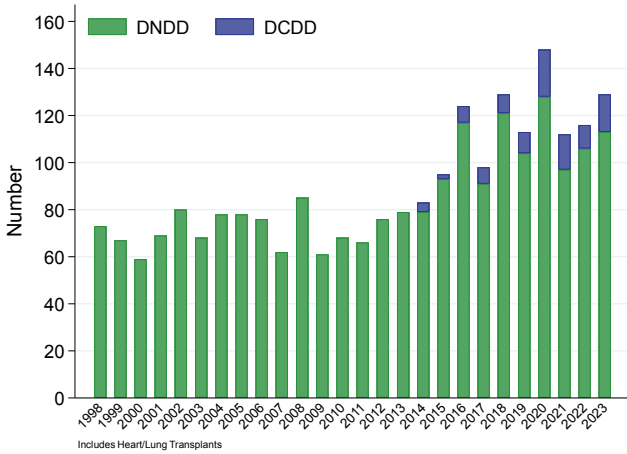


Figure 7.2.2
Hearts Transplanted by Donation Pathway
New Zealand 1998-2023

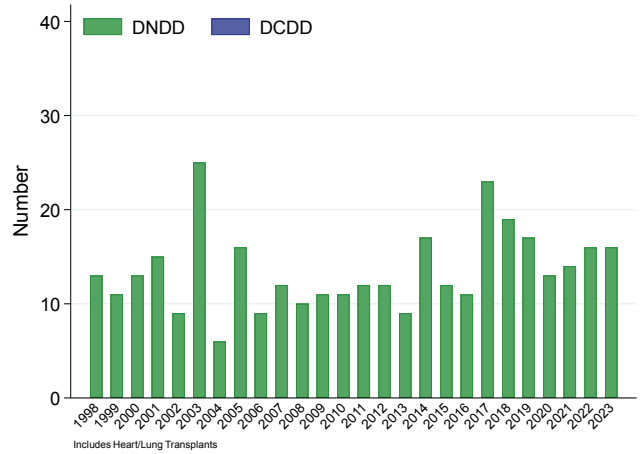
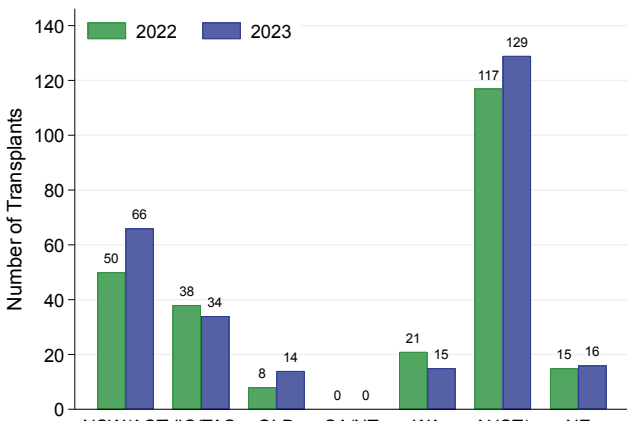


Figure 7.3
Deceased Donor Heart Transplant Recipients* by
Transplant State, Australia and New Zealand, 2022-2023



* These numbers include the exchange of organ between States and Territories of Australia and New Zealand

AGE OF HEART DONORS

The age distribution of donors providing retrieved hearts for Australia and New Zealand is presented in Figure 7.4.

Figure 7.4.1
Age of Donors Providing Retrieved Hearts Australia 2023

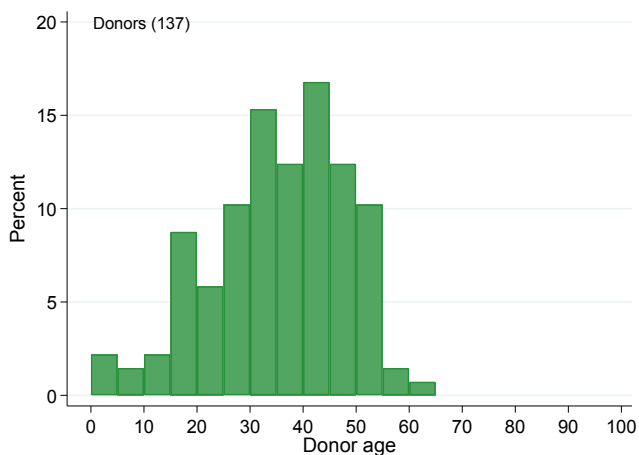
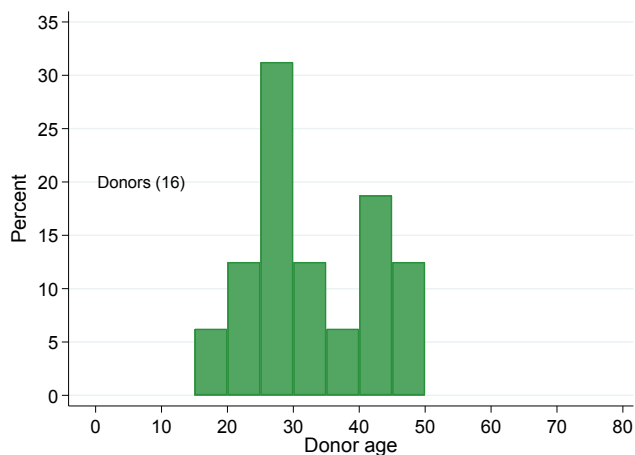


Figure 7.4.2
Age of Donors Providing Retrieved Hearts New Zealand 2023



DONOR HEART FUNCTION

In Australia, 101 (74.3%) donors with hearts retrieved had a normal electrocardiogram (ECG) and 113 (83.1%) had a normal echocardiogram, prior to heart donation. In New Zealand, 16 out of the 16 heart donors had a normal ECG and 14 had a normal echocardiogram.

HEARTS NOT RETRIEVED

The reasons why the heart was not retrieved for organ transplantation are presented in Table 7.1.

Table 7.1
Reasons for Heart Not Retrieved 2023

Reason	Australia	New Zealand
Intraoperative assessment	4	0
Post WCRS* did not die in timeframe	0	0
Cardiac arrest prior to WCRS*/X- Clamp	0	0
Surgical retrieval injury	0	0
Declined in offer process	120	27
Organ not offered - pathway	8	1
Organ not offered - age of donor	48	3
Organ not offered - not medically suitable	42	3
No consent from Coroner	10	0
Family withdrew consent	0	0
Total	232	34

*WCRS-Withdrawal of cardio-respiratory support

HEARTS RETRIEVED AND NOT UTILISED FOR TRANSPLANTATION

Figure 7.5 shows the non-utilisation rate of retrieved hearts - the proportion of hearts that were retrieved for the purpose of solid organ transplantation, but not ultimately transplanted into a recipient (either due to an absence of suitable recipients, or the heart being found to be medically or surgically unsuitable after retrieval). Organ donation for the purpose of research is excluded when calculating a specific organ's non-utilisation rate for transplantation.

In Australia, the non-utilisation rate of hearts was 5.1% in 2023. In New Zealand, the non-utilisation rate of hearts was 0.0% in 2023.

Figure 7.5.1
Non-utilisation Rate of Retrieved Heart - Australia 2019-2023

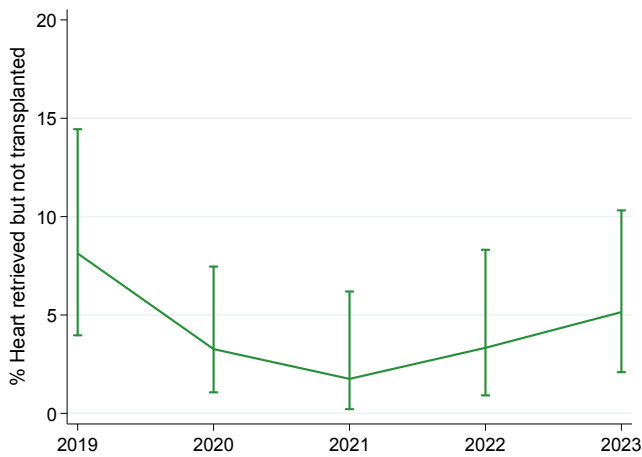


Figure 7.5.2
Non-utilisation Rate of Retrieved Heart - New Zealand 2019-2023

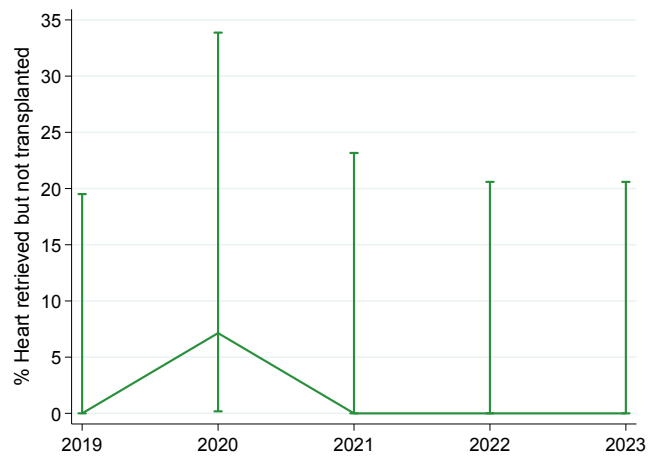


Table 7.2 tabulates the reasons hearts were not used for transplantation after retrieval for that purpose since 2021.

Table 7.2
Reasons Heart Retrieved & Not Utilised for Transplantation, 2021 - 2023

Country	Reason	2021	2022	2023
Australia	Intraoperative assessment	0	2	2
	Assessment at transplant unit	1	2	4
	Surgical retrieval injury	0	0	1
	Other	1	0	0
	Total	2	4	7
New Zealand	Intraoperative assessment	0	0	0
	Assessment at transplant unit	0	0	0
	Surgical retrieval injury	0	0	0
	Other	0	0	0
	Total	0	0	0

OUTCOME OF HEART DONATION

The outcome of heart donation activity in Australia and New Zealand throughout the donation process is presented in table 7.3.

Table 7.3.1
Outcome of Request for Heart Donation in Australia, 2019–2023

Outcome of Request	2019	2020	2021	2022	2023
Total Donors	548	463	421	454	513
Heart Requested for Donation	398	379	345	357	405
Heart Not Requested for Donation	150	84	76	97	108
Heart with Consent Given	367	354	325	330	369
Heart with Consent Not Given	31	25	20	27	36
Heart Retrieved	123	153	117	124	137
Heart Not Retrieved	244	201	208	206	232
Heart Transplanted	113	148	112	116	129
Heart Not Used	10	5	2	4	7
Heart Retrieved for Research*	0	0	3	4	1
Recipients Transplanted	113	148	112	116	129
Heart/Double Lung Procedures	3	6	4	6	3
Heart Non-Utilisation Rate	8.1%	3.3%	1.8%	3.3%	5.1%
Heart Utilisation Rate	91.9%	96.7%	98.2%	96.7%	94.9%

*Use for research primary intention of retrieval

Table 7.3.2
Outcome of Request for Heart Donation in New Zealand, 2019-2023

Outcome of Request	2019	2020	2021	2022	2023
Total Donors	74	64	66	63	64
Heart Requested for Donation	49	46	41	43	51
Heart Not Requested for Donation	25	18	25	20	13
Heart with Consent Given	49	46	41	41	50
Heart with Consent Not Given	0	0	0	2	1
Heart Retrieved	17	15	14	16	16
Heart Not Retrieved	32	31	27	25	34
Heart Transplanted	17	13	14	16	16
Heart Not Used	0	1	0	0	0
Heart Retrieved for Research*	0	1	0	0	0
Recipients Transplanted	17	13	14	16	16
Heart Non-Utilisation Rate	0.0%	7.1%	0.0%	0.0%	0.0%
Heart Utilisation Rate	100.0%	92.9%	100.0%	100.0%	100.0%

*Use for research primary intention of retrieval



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