



SECTION 7

Deceased Donor Heart Donation

SUMMARY

This section summarises heart donation activity from deceased donors in 2021, compared with previous years. The rate of hearts transplanted in 2021 was 4.4 pmp in Australia, and 2.7 pmp in New Zealand

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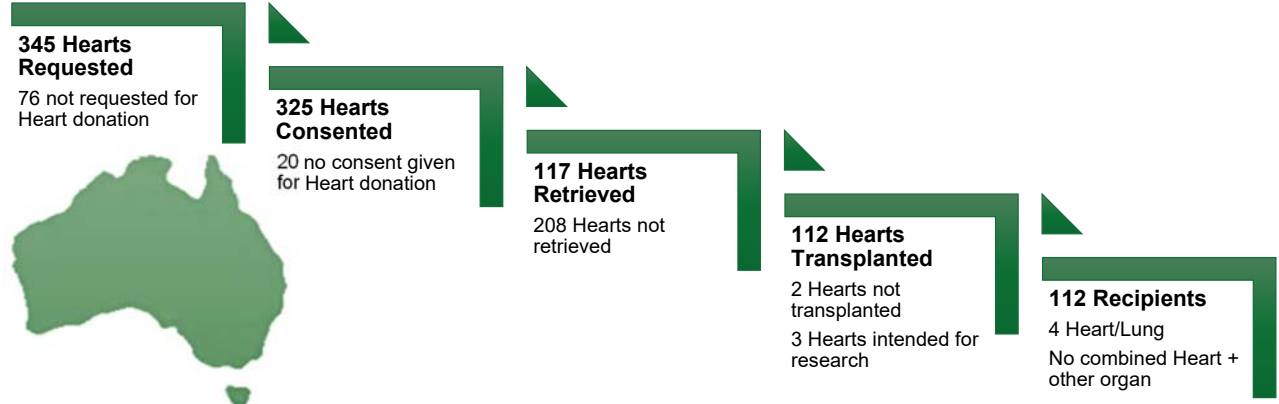
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Heart Donation

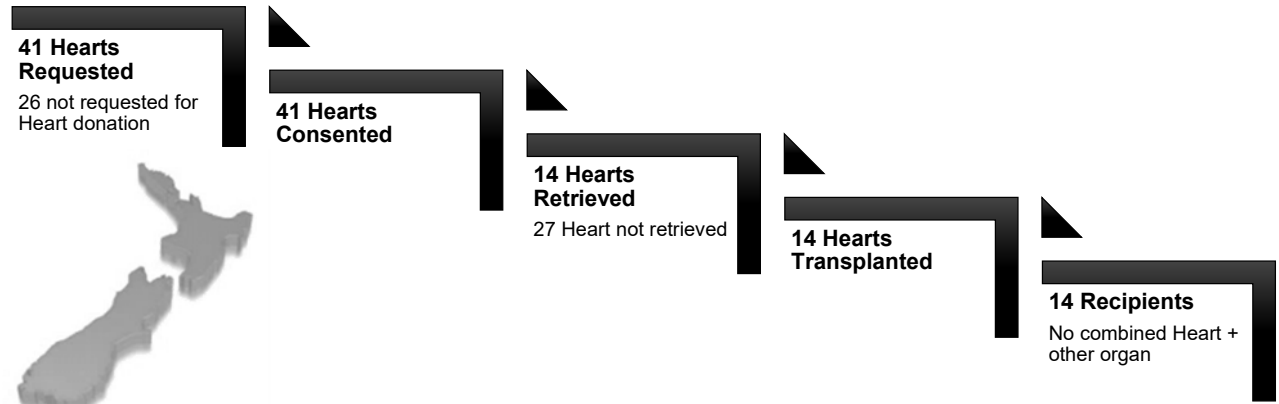
Of the 421 deceased organ donors in 2021 in Australia, 117 (27.8%) had heart retrieved. From these heart donors there were 112 heart transplant recipients (4.4 pmp). Of these 112 heart transplant recipients, four received heart/double lung transplants and two received a combined heart/kidney transplant. Figure 7.1.1 shows the outcomes of requests for heart donation in Australia for 2021

Table 7.1.1 Outcomes of Request for Heart Donation from Actual Donors Australia 2021



In New Zealand, there were forty-one donors (62.1%) who consented to heart donation. From these consented donors, fourteen hearts were retrieved, and fourteen recipients received a heart transplant in 2021 (2.7 pmp). This was an increase of 75.0% in the total number of heart transplants compared with 2020 (8). Four recipients received a combined heart/lung transplant. Figure 7.1.2 shows the outcomes of requests for heart donation in New Zealand for 2021.

Table 7.1.2 Outcomes of Request for Heart Donation from Actual Donors New Zealand 2021



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 1998–2021

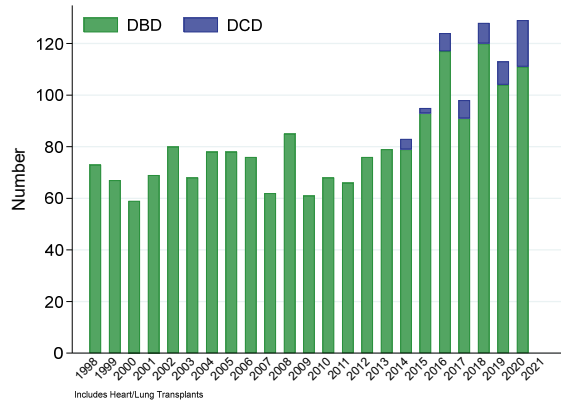


Figure 7.2.2 - Hearts Transplanted by Donation Pathway New Zealand 1998–2021

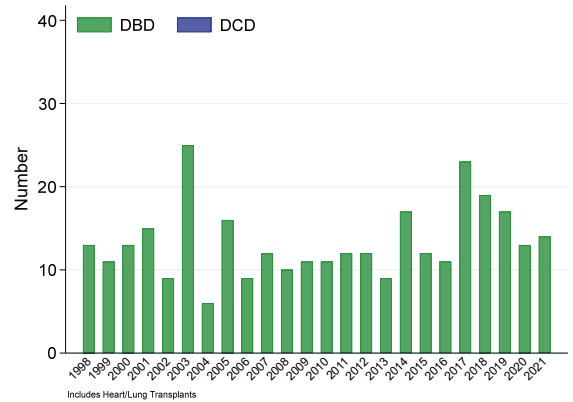
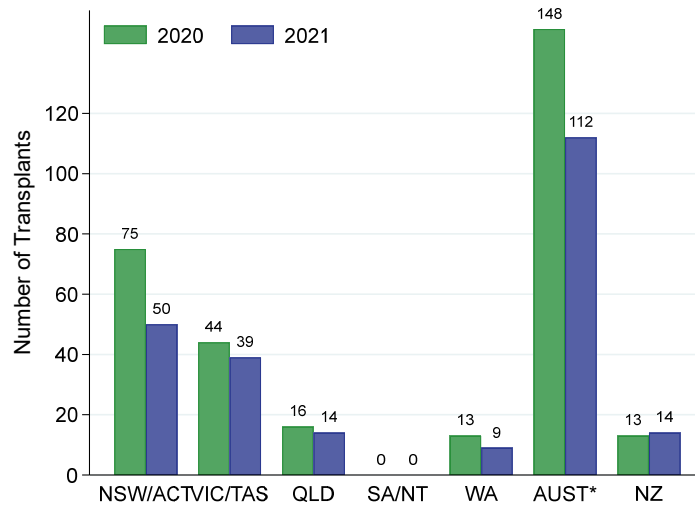


Figure 7.3 - Deceased Donor Heart Transplant Recipients* by Transplant State, Australia, and New Zealand, 2020–2021



*These numbers include the exchange of organs 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 2021

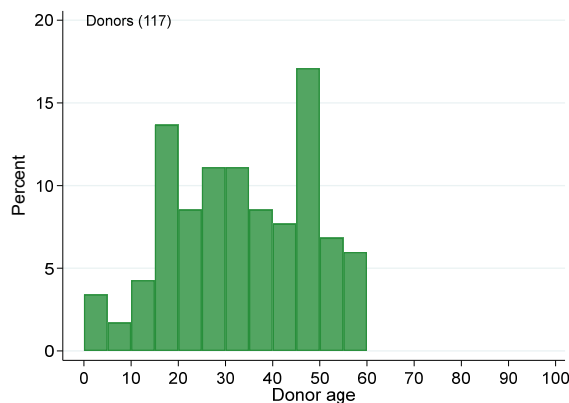
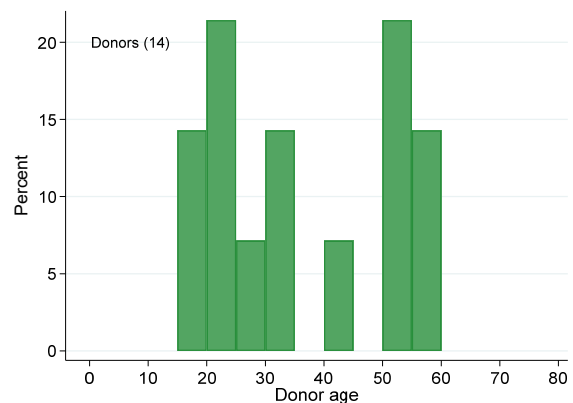


Figure 7.4.2 - Age of Donors Providing Retrieved Hearts New Zealand 2021



Donor Heart Function

In Australia, 86 (73.5%) donors with hearts retrieved had a normal ECG and 100 (85.5%) had a normal echocardiogram, prior to heart donation. In New Zealand, thirteen out of the fourteen heart donors had a normal ECG and fourteen had a normal echocardiogram.

Hearts Not Retrieved

In Australia, the non-utilisation rate of Hearts was 1.7% in 2021. The reasons why a heart was not retrieved for organ transplantation are presented in Table 7.1.

Table 7.1 Reasons for Heart Not Retrieved 2021

Reason	Australia	New Zealand
Logistics	0	0
Not Medically Suitable	38	16
Surgically Unsuitable	0	0
Trauma to Organ	0	0
No Suitable Recipients	112	9
Age of Donor	35	1
DCD Donor	11	1
Consent Withdrawn	12	0
Others	0	0
Total	208	27

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 New Zealand, the non-utilisation rate of Hearts was 0.0% in 2021.

Figure 7.5.1 - Non-utilisation Rate of Retrieved Heart - Australia 2017–2021

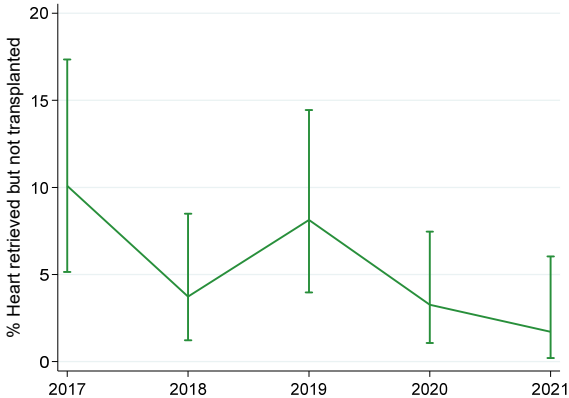
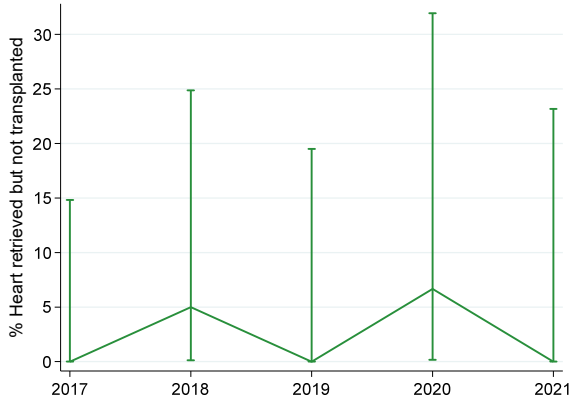


Figure 7.5.2 - Non-utilisation Rate of Retrieved Heart - New Zealand 2017–2021



Hearts Retrieved and Not Utilised for Transplantation

Table 7.2 tabulates the reasons hearts were not used for transplantation after retrieval for that purpose since 2017.

Table 7.2 Reasons Heart Retrieved & Not Utilised for Transplantation, Australia (New Zealand) 2017 – 2021

Reason	2017	2018	2019	2020	2021
Logistics	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)
Not Medically Suitable	8 (0)	4 (0)	9 (0)	3 (1)	2 (0)
Not Surgically Suitable	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Trauma to Organ	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
No Suitable Recipients	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Recipient Issue	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Other	3 (0)	0 (0)	1 (0)	2 (0)	0 (0)
Total	11 (0)	5 (1)	10 (0)	5 (1)	2 (0)

Outcome of Heart Donation

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

Table 7.3.1 Outcome of Request for Heart Donation in Australia, 2017–2021

Outcome of Request	2017	2018	2019	2020	2021
Total Donors	510	554	548	463	421
Heart Requested for Donation	387	421	398	379	345
Heart Not Requested for Donation	123	133	150	84	76
Heart with Consent Given	358	390	367	354	325
Heart with Consent Not Given	29	31	31	25	20
Heart Retrieved	109	134	123	153	117
Heart Not Retrieved	249	256	244	201	208
Heart Transplanted	98	129	113	148	112
Heart Not Used	11	5	10	5	2
Heart Retrieved for Research and Not for Transplantation	0	0	0	0	3
Recipients Transplanted	98	129	113	148	112
Heart/Double Lung Procedures	5	7	3	6	4
Heart Non-Utilisation Rate	10.1%	3.7%	8.1%	3.3%	1.7%
Heart Utilisation Rate	89.9%	96.3%	91.9%	96.7%	95.7%

Table 7.3.2 Outcome of Request for Heart Donation in New Zealand, 2017–2021

Outcome of Request	2017	2018	2019	2020	2021
Total Donors	73	62	74	64	66
Heart Requested for Donation	49	42	49	46	41
Heart Not Requested for Donation	24	20	25	18	26
Heart with Consent Given	49	41	49	46	41
Heart with Consent Not Given	0	1	0	0	0
Heart Retrieved	23	20	17	15	14
Heart Not Retrieved	26	21	32	31	27
Heart Transplanted	23	19	17	13	14
Heart Not Used	0	1	0	1	0
Heart Retrieved for Research and Not for Transplantation	0	0	0	1	0
Recipients Transplanted	23	19	17	13	14
Heart Non-Utilisation Rate	0.0%	5.0%	0.0%	6.7%	0.0%
Heart Utilisation Rate	100.0%	95.0%	100.0%	86.7%	100.0%