

Kidney Transplant Activity New Zealand

2015 Calendar Year

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Data Collection

Data is provided directly to the National Renal Transplantation Service (NRTS) from the three Transplanting Units and from individual units to the Australian and New Zealand Dialysis and Transplantation Registry (ANZDATA).

Kidney Transplants in 2015

There are three DHBs that provide kidney transplant procedures in Auckland, Wellington and Christchurch. Services are arranged geographically around the transplant centres, with client DHBs referring most patients to their nearest transplant centre (see appendix).

There were 147 kidney transplants performed in New Zealand in 2015.

This included 74 living donor and 73 deceased donor kidney transplants. There were two living donor kidney exchange chains (each comprising two transplants).

This is the largest total number of kidney transplants performed in New Zealand in a calendar year (previous greatest was 138 in 2014).

At the estimated population of 4.60 million (StatsNZ at 1 June 2015), the transplant rate was 32.0 per million population (pmp). This is the highest total transplant rate pmp (the previous highest was 30.3 in 2014, comprising 14.5 pmp transplants from deceased donors and 15.8 pmp transplants from living donors).

Table 1: Transplant Characteristics by Transplant Centre

	Auckland	Wellington	Christchurch	Overall	Pmp
Kidney Transplants	90	30	27	147	32.0
Deceased donor, n (%)	49 (54)	15 (50)	9(33)	73 (50)	15.9
Living donor, n (%)	41 (45)	15 (50)	18 (67)	74 (50)	16.1

Annual Target Progress

The target for the National Renal transplant service is to “increase the volume of live donor transplantation by 10 per annum from a base of approximately 110 live and deceased donor transplants per annum to 160 per annum in 2018/19”

Table 2: Target and Observed Kidney Transplantation in NZ, by Donor Source and Year

Year	Target		Observed	
	Live Donor	Total	Live Donor	Total
2004			48	105
2005			46	93
2006			49	90
2007			58	123
2008			69	122
2009			67	121
2010			60	110
2011			57	118
2012			54	108
2013			59	116
2014	70	120	72	138
2015	80	130	74	147
2016	90	140		
2017	100	150		
2018	110	160		

Notes:

- 1) NRTS was established in September 2014. Data from 10 years prior presented for context.
- 2) Total transplants = numbers of recipients of live donor + deceased donor kidney transplants, including recipients of kidneys with or without other organs at the same operation.

Transplants per 100 Dialysis Patients, by dialysis unit and DHB of domicile

Overall, there were 5.5 kidney transplants per 100 dialysis patients in New Zealand in 2015. This was a substantial increase on the annual average of 4.8, from the four prior years, and an increase from 5.3 per 100 dialysis patients in 2014.

There was an improvement in the rate of transplants per 100 dialysis patients at 8 of 11 DHBs with comprehensive dialysis services (including their client DHBs). There was a small reduction in transplantation rate per 100 dialysis reduction at Northland DHB, and a reduction in Taranaki.

It should be noted that no attempt is made to adjust for case-mix at different DHBs, so comparisons between DHBs may be confounded. Also, due to small numbers at individual DHBs, random variability may be responsible for year to year changes in transplantation rate.

Table 2: Transplants by DHB of Domicile

	Deceased Donor	Living Donor	Total	Dialysis Prevalent Numbers (End 2014)	Transplants per 100 Dialysis Patients	
					2015	Annual Mean 2011-2014
Starship	1	7	8	11	72	64
Auckland Region	46	32	78	1929	4.0	3.5
Northland	4	3	7	171	4.1	4.7
Waitemata	8	9	17	278	6.1	3.9 ³
Auckland	9	6	15	322	4.7	
Counties Manukau	17	7	24	616	3.9	3.1
Waikato (includes BOP, Lakes, Tairāwhiti)	7	7	14	489	2.9	2.8
Taranaki	1	0	1	53	1.9	5.8
Wellington Region	15	17	32	490	6.5	6.4
Hawke's Bay	5	1	6	103	5.8	5.8
MidCentral (includes Whanganui)	4	2	6	142	7.2	5.1
Capital & Coast (includes Wairarapa, Hutt, Nelson/Marlborough)	6	14	20	245	8.2	7.3
Christchurch Region	11	18	29	248	11.7	9.3
Canterbury (includes West Coast, South Canterbury)	9	11	20	142	14.1	11.0
Southern	2	7	9	106	8.5	7.1
Total	73	74	147	2678	5.5	4.8

Notes on table 2:

1. DHB of domicile is the recipients, at discharge from hospital. Living donors may come from different DHBs to their recipients.
2. Transplants per 100 prevalent dialysis patients at 31 December the year prior, per ANZDATA.
3. Annual Mean 2011-2014 for Auckland and Waitemata provided as a single unit (as they were for part of that period).
4. Paediatric patients <=16 years, managed via Starship and transplanted in Auckland, are reported separately.

Multi-organ Transplantation (all performed in Auckland)

In 2015, there were two kidney-pancreas transplants performed (DHB of Domicile: Canterbury and Mid-Central) and two liver-kidney transplants (DHB of Domicile: Northland and Counties Manakau). These are included in table 2.

ABO Incompatible Kidney Transplants (ABOi)

ABOi are performed at Auckland and Christchurch, using a similar protocol (developed in Auckland). All ABOi are living donor transplants. ABOi is an important programme that enables additional directed donations where there is no option for an ABO compatible donor (including kidney exchange).

There were 10 ABOi in 2015 (9 Auckland, 1 Christchurch). There were two paediatric recipients. Of the adult recipients, three were from Counties Manakau, and one each from Canterbury, Waitemata, Auckland, Nelson-Malborough and Northland.

Kidney Exchange

Where a willing, acceptable kidney donor is incompatible with their recipient, the pair are encouraged to enter the NZ Kidney Exchange. This facilitates additional live donor transplants by providing exchanges between compatible pairs within the exchange. Exchange transplants may take place within or between transplant centres.

In 2015, there were two exchanges of two kidneys each, providing four kidney transplants. All exchange transplants in 2015 were undertaken in Auckland.

Appendix: Transplantation Service Arrangement in New Zealand

Within New Zealand there are three types of district health boards (DHBs), with respect to provision of transplantation services:

- 1) Transplanting DHBs – these DHBs provide kidney transplantation services for their local population and several other DHBs. These DHBs also have comprehensive dialysis services. There are three of these.
- 2) Referring DHBs with “comprehensive” dialysis services. These DHBs provide their own dialysis services without any involvement from other DHBs. There are eight of these.
- 3) Referring DHBs without comprehensive dialysis services. These DHBs are dependent on referring or transplanting DHBs for at least part of their dialysis service. There are 9 of these.

Please note that “comprehensive” is an arbitrary distinction. For example, Nelson/Marlborough provides many dialysis services (with support from Wellington for some elements only), but is included in Capital & Coast DHB’s figures.

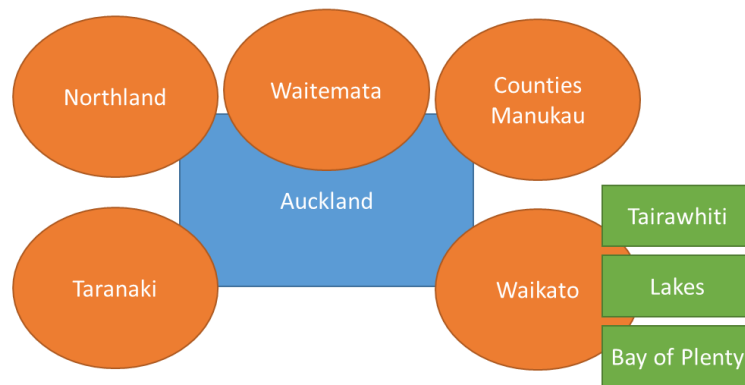
Three district health boards (Auckland, Capital & Coast and Canterbury) provide kidney transplantation procedures (living and deceased donor transplants) regionally (labelled “Auckland”, “Wellington” and “Christchurch”). Assessment of recipients and potential living donors is complex and is, at least partially, provided by referring DHBs in many cases. Referring DHBs send patients to a single transplant centre for routine transplants. Auckland DHB provides multi-organ transplants (kidney plus another organ) and paediatric transplantation for the entire country. ABO incompatible transplantation is provided in Auckland and Christchurch only.

The arrangements of DHBs into three regional transplantation services is shown in Figure 1. Some patients are, therefore, dependent on services provided via three DHBs for access to transplantation.

Transplanting DHBs provide the immediate after care following transplantation, with recipients and donors returning to their DHB of domicile for long term care.

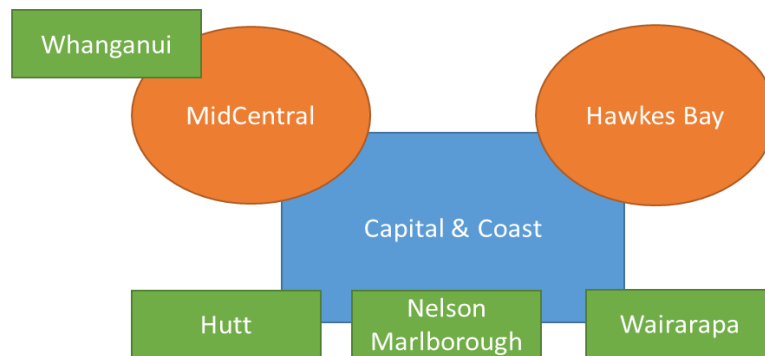
Figure 1: Arrangement of DHBs for Provision of Kidney Transplantation Services

Auckland Renal Transplant Group

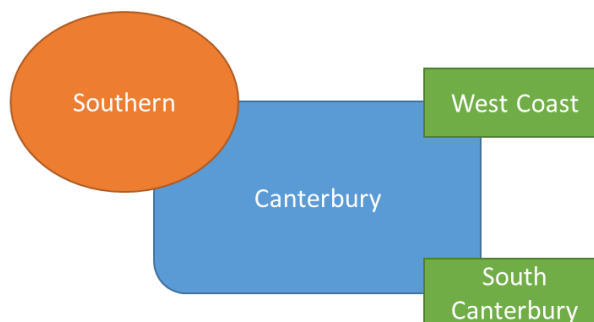


Auckland provide national kidney transplantation services for all other DHBs: Kidney-Pancreas, ABO incompatible (except Canterbury) and paediatric transplantation

Wellington Renal Transplant Service



South Island Kidney Transplant Committee



Legend:

- Transplanting DHBS
- DHBs with comprehensive dialysis services
- DHBs without comprehensive dialysis services