



CHAPTER 2

Prevalence of Kidney Failure with Replacement Therapy

Summarising the number of prevalent kidney replacement therapy patients in Australia and New Zealand, the prevalence rate per million population and the demographics and clinical characteristics of prevalent patients.

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Summary and Highlights

The prevalent patients undertaking Kidney Replacement Therapy (KRT) in Australian and New Zealand continues to steadily increase. This peaked in 2021 with 28542 people (1109 per million population) in Australia and 5452 (1054 per million population) in New Zealand on KRT. The greatest proportion of people are those aged 75-84 in Australia with a prevalence of 3083 per million population, whereas in New Zealand this is those aged 65-74 with a prevalence of 2682 per million population.

The burden of kidney disease for those on KRT disproportionately impacts first nations people. The prevalence of Aboriginal and Torres Strait Islander people on dialysis is 2455 per million population compared with 511 per million population for people who are not Aboriginal and Torres Strait Islander ethnicity. Similarly, the prevalence in Māori people on dialysis is 1129 per million population compared with 496 per million population non-Māori people.

Overall, there are a greater number of prevalent patients being treated with kidney transplantation compared with dialysis, with haemodialysis being more common than peritoneal dialysis. For dialysis patients, satellite haemodialysis is the most common location of dialysis followed by hospital dialysis. The number of people with co-morbid conditions undergoing KRT continues to decline, apart from type 2 diabetes mellitus which continues to increase.

Suggested Citation

ANZDATA Registry. 45th Report, Chapter 2: Prevalence of Kidney Failure with Replacement Therapy. Australia and New Zealand Dialysis and Transplant Registry, Adelaide, Australia. 2022. Available at: <http://www.anzdata.org.au>

All Kidney Replacement Therapy Modalities

Table 2.1 shows the number of prevalent patients treated with kidney replacement therapy (KRT) in Australia and New Zealand over the last 20 years. The prevalence per million population (pmp) is also shown. Table 2.2 shows the same data for the last 5 years, but with dialysis modality categorised.

Population estimates for Australia and New Zealand used throughout this chapter for the calculation of prevalence per million population were sourced from the Australian Bureau of Statistics (2021)¹ and Stats NZ (2021)².

Table 2.1 Prevalence (pmp) of Kidney Replacement Therapy 2002-2021

Year	Australia			New Zealand		
	Dialysis	Transplant	Total	Dialysis	Transplant	Total
2002	7262 (373)	5846 (300)	13108 (672)	1594 (404)	1113 (282)	2707 (686)
2003	7719 (391)	6078 (308)	13797 (700)	1711 (425)	1164 (289)	2875 (714)
2004	8003 (402)	6382 (320)	14385 (722)	1774 (434)	1220 (298)	2994 (732)
2005	8638 (428)	6645 (329)	15283 (757)	1878 (454)	1244 (301)	3122 (755)
2006	9262 (453)	6978 (341)	16240 (794)	1997 (477)	1259 (301)	3256 (778)
2007	9733 (467)	7246 (348)	16979 (815)	2071 (490)	1304 (309)	3375 (799)
2008	10181 (479)	7659 (360)	17840 (840)	2106 (494)	1355 (318)	3461 (812)
2009	10486 (483)	8054 (371)	18540 (855)	2282 (530)	1408 (327)	3690 (858)
2010	10753 (488)	8510 (386)	19263 (874)	2389 (549)	1449 (333)	3838 (882)
2011	11111 (497)	8873 (397)	19984 (895)	2395 (546)	1490 (340)	3885 (886)
2012	11575 (509)	9270 (408)	20845 (917)	2475 (561)	1528 (347)	4003 (908)
2013	11902 (515)	9669 (418)	21571 (933)	2603 (586)	1579 (355)	4182 (941)
2014	12323 (525)	10075 (429)	22398 (954)	2692 (596)	1632 (361)	4324 (957)
2015	12644 (531)	10478 (440)	23122 (971)	2717 (589)	1709 (371)	4426 (960)
2016	12824 (530)	11047 (457)	23871 (987)	2771 (588)	1789 (379)	4560 (967)
2017	13121 (533)	11605 (472)	24726 (1005)	2798 (581)	1895 (394)	4693 (975)
2018	13547 (542)	12175 (487)	25722 (1030)	2870 (586)	1977 (403)	4847 (989)
2019	13987 (551)	12735 (502)	26722 (1053)	2854 (573)	2099 (422)	4953 (995)
2020	14565 (567)	13078 (509)	27643 (1076)	3005 (590)	2196 (431)	5201 (1022)
2021	15193 (590)	13349 (519)	28542 (1109)	3155 (610)	2297 (444)	5452 (1054)

Table 2.2 Prevalence (pmp) of Kidney Replacement Therapy by Modality 2017-2021

Country	Patients	2017	2018	2019	2020	2021
Australia	Total	24726 (1005)	25722 (1030)	26722 (1053)	27643 (1076)	28542 (1109)
	Transplant	11605 (472)	12175 (487)	12735 (502)	13078 (509)	13349 (519)
	Dialysis	13121 (533)	13547 (542)	13987 (551)	14565 (567)	15193 (590)
	Percentage PD	18%	18%	17%	17%	18%
	Percentage Home HD*	8%	8%	8%	8%	8%
	Percentage Facility HD	74%	74%	75%	75%	75%
New Zealand	Total	4693 (975)	4847 (989)	4953 (995)	5201 (1022)	5452 (1054)
	Transplant	1895 (394)	1977 (403)	2099 (422)	2196 (431)	2297 (444)
	Dialysis	2798 (581)	2870 (586)	2854 (573)	3005 (590)	3155 (610)
	Percentage PD	31%	30%	29%	28%	26%
	Percentage Home HD*	16%	15%	14%	13%	12%
	Percentage Facility HD	53%	55%	57%	59%	62%

*Includes Community House HD

Table 2.3 and figures 2.1-2.2 show the 2021 prevalence (pmp) of KRT by age groups.

Table 2.3 Prevalence (pmp) of Kidney Replacement Therapy by Age 2021

Age	Australia	New Zealand
0-4	28 (18)	5 (17)
5-14	178 (55)	39 (59)
15-24	508 (163)	119 (183)
25-34	1337 (355)	336 (444)
35-44	2655 (755)	615 (919)
45-54	4978 (1532)	1005 (1537)
55-64	6835 (2279)	1501 (2381)
65-74	7033 (2910)	1295 (2682)
75-84	4204 (3083)	502 (1849)
85+	786 (1432)	35 (376)

Figure 2.1.1 - Prevalent KRT Patient Numbers - Australia - 31 December 2021

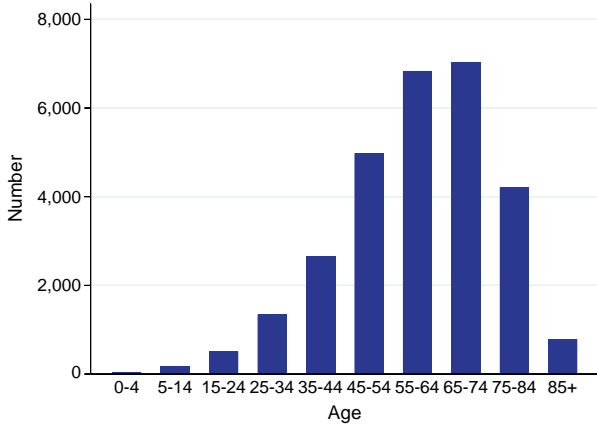


Figure 2.2.1 - Prevalent KRT Patient Numbers - New Zealand - 31 December 2021

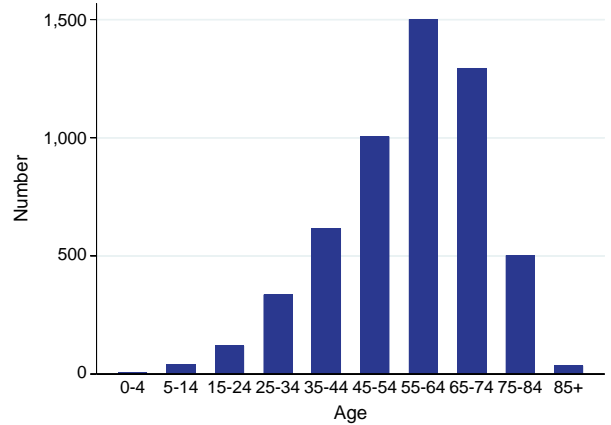


Figure 2.1.2 - Prevalent KRT Patients Per Million Population - Australia - 31 December 2021

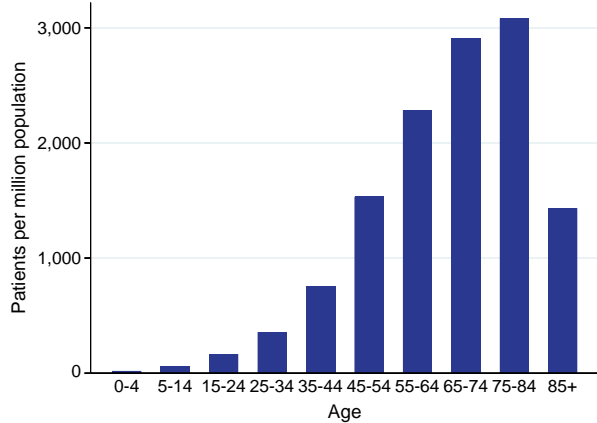


Figure 2.2.2 - Prevalent KRT Patients Per Million Population - New Zealand - 31 December 2021

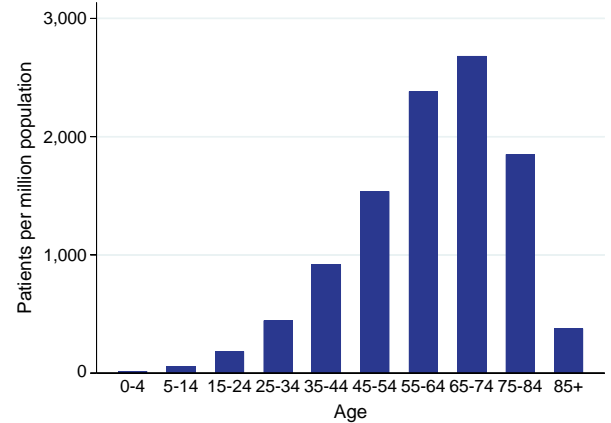


Table 2.4 shows the prevalence (pmp) of KRT by state/territory over 2017-2021. State is based on the state of the treating hospital*.

*NSW population estimates exclude residents of the NSW South Eastern region which includes the local government areas of Bega Valley, Eurobodalla, Goulburn Mulwaree, Hilltops, Queanbeyan-Palerang Regional, Snowy Monaro Regional, Upper Lachlan Shire and Yass Valley. ACT population includes residents of the NSW South Eastern region. The population base for the NSW South Eastern region is based on the estimated resident population by local government area from the Australian Bureau of Statistics (2022)³.

Table 2.4 Prevalence (pmp) of Kidney Replacement Therapy by State/Territory 2017-2021

Modality	State	2017	2018	2019	2020	2021
Dialysis	QLD	2542 (516)	2691 (537)	2786 (547)	2938 (568)	3096 (593)
	NSW*	4005 (524)	4077 (526)	4213 (536)	4386 (553)	4533 (570)
	ACT*	274 (429)	268 (412)	291 (442)	299 (449)	314 (468)
	VIC	3142 (497)	3240 (501)	3284 (498)	3435 (513)	3544 (533)
	TAS	217 (415)	209 (396)	226 (423)	211 (390)	226 (417)
	SA	868 (504)	913 (526)	925 (528)	979 (553)	1021 (576)
	NT	691 (2792)	735 (2975)	778 (3161)	776 (3151)	795 (3227)
	WA	1382 (537)	1414 (545)	1484 (566)	1541 (578)	1664 (621)
	Australia	13121 (533)	13547 (542)	13987 (551)	14565 (567)	15193 (590)
	New Zealand	2798 (581)	2870 (586)	2854 (573)	3005 (590)	3155 (610)
Transplant	QLD	2178 (442)	2269 (453)	2394 (470)	2444 (472)	2536 (486)
	NSW*	3271 (428)	3455 (446)	3593 (457)	3680 (464)	3735 (470)
	ACT*	301 (471)	298 (459)	297 (451)	300 (450)	296 (441)
	VIC	3315 (524)	3530 (546)	3704 (561)	3805 (568)	3851 (579)
	TAS	264 (505)	289 (547)	300 (561)	307 (568)	307 (567)
	SA	1054 (611)	1058 (609)	1090 (622)	1113 (629)	1149 (648)
	NT	111 (448)	116 (470)	129 (524)	142 (577)	150 (609)
	WA	1111 (432)	1160 (447)	1228 (468)	1287 (483)	1325 (494)
	Australia	11605 (472)	12175 (487)	12735 (502)	13078 (509)	13349 (519)
	New Zealand	1895 (394)	1977 (403)	2099 (422)	2196 (431)	2297 (444)

*ACT and NSW population estimates adjusted for SE NSW Region.

Tables 2.5 and 2.6 show the same data by ethnicity for Australia and New Zealand, respectively.

Table 2.5 Prevalence (pmp) of Kidney Replacement Therapy by Ethnicity, Australia 2017-2021

Ethnicity	Modality	2017	2018	2019	2020	2021
Aboriginal/Torres Strait Islander	Dialysis	1914 (2350)	1980 (2383)	2083 (2456)	2119 (2448)	2170 (2455)
	Transplant	279 (343)	309 (372)	341 (402)	369 (426)	398 (450)
Other	Dialysis	10851 (456)	11183 (463)	11591 (473)	12149 (489)	12711 (511)
	Transplant	10573 (444)	11068 (458)	11546 (471)	11838 (477)	12063 (485)
Not reported	Dialysis	356	384	313	297	312
	Transplant	753	798	848	871	888

Table 2.6 Prevalence (pmp) of Kidney Replacement Therapy by Ethnicity, New Zealand 2017-2021

Ethnicity	Modality	2017	2018	2019	2020	2021
Māori	Dialysis	922 (1150)	926 (1134)	923 (1107)	970 (1135)	985 (1129)
	Transplant	213 (266)	231 (283)	251 (301)	267 (312)	283 (324)
Other	Dialysis	1863 (464)	1926 (472)	1916 (462)	2006 (474)	2133 (496)
	Transplant	1674 (417)	1735 (425)	1837 (443)	1916 (452)	1999 (465)
Not reported	Dialysis	13	18	15	29	37
	Transplant	8	11	11	13	15

Figure 2.3 shows the overall distribution of KRT modality by country at the end of 2021. The dialysis modalities are shown separately in figure 2.4.

Figure 2.3 - KRT Modality by Country 2021

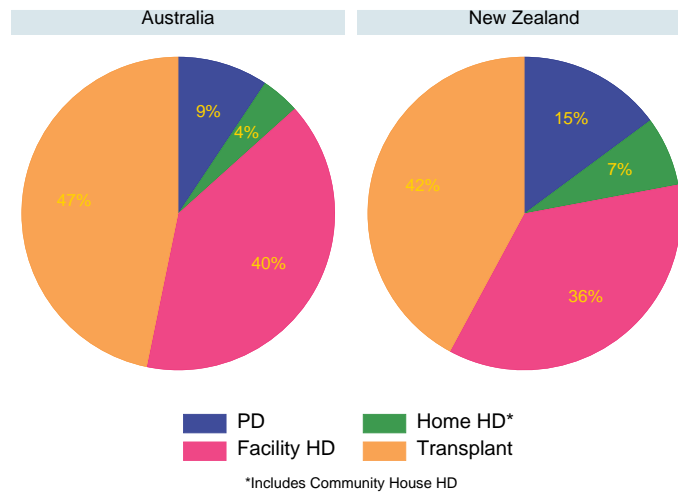
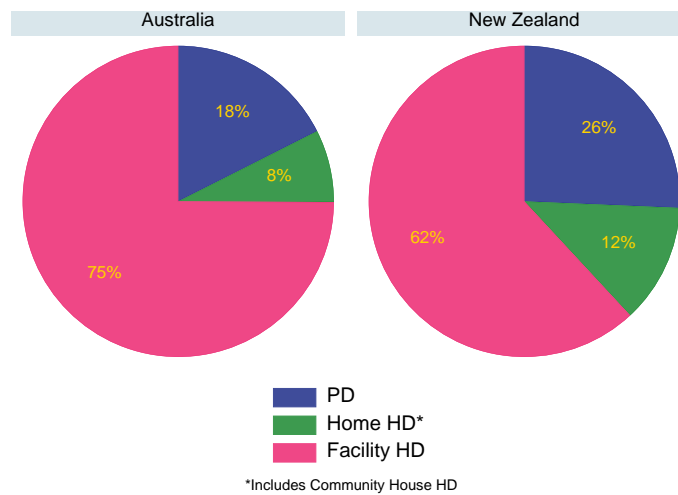


Figure 2.4 - Dialysis Modality by Country 2021



Figures 2.5 and 2.6 show the same data by Australian state/territory.

Figure 2.5 - KRT Modality by State/Territory - 31 December 2021

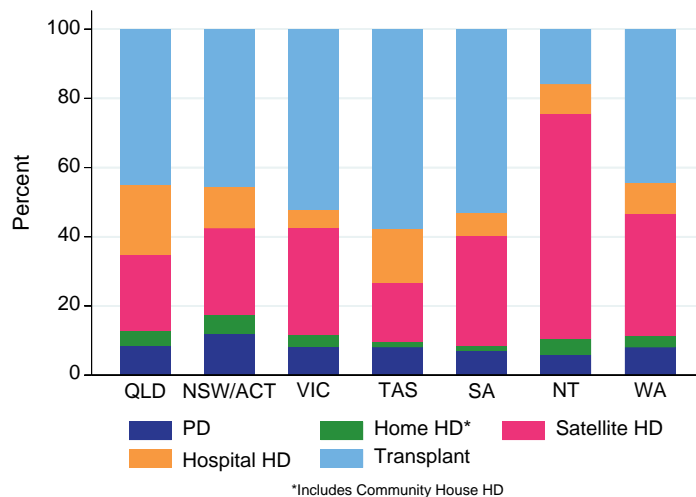
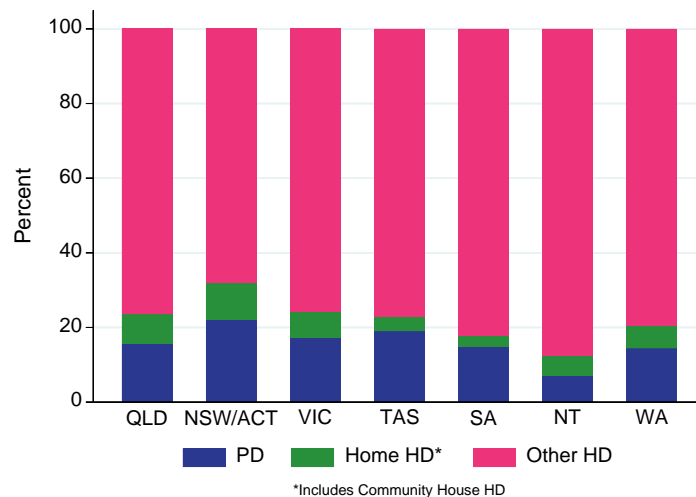


Figure 2.6 - Dialysis Modality by State/Territory - 31 December 2021



Dialysis

Table 2.7 and figures 2.7-2.8 show the age distribution of prevalent dialysis patients in 2021.

Table 2.7 Dialysis Prevalence (pmp) by Age - 2021

Age	Australia	New Zealand
0-4	17 (11)	2 (7)
5-14	27 (8)	4 (6)
15-24	148 (48)	51 (78)
25-34	533 (142)	169 (224)
35-44	1087 (309)	336 (502)
45-54	2186 (673)	555 (849)
55-64	3293 (1098)	824 (1307)
65-74	3872 (1602)	801 (1659)
75-84	3311 (2428)	385 (1418)
85+	719 (1310)	28 (300)

Figure 2.7.1 - Prevalent Dialysis Patient Numbers - Australia - 31 December 2021

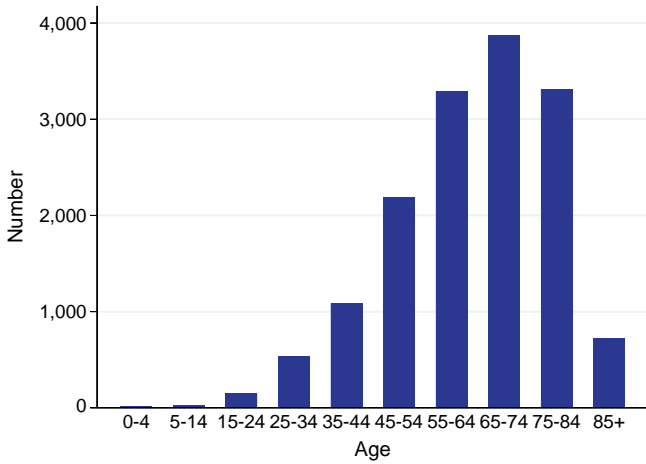


Figure 2.7.2 - Prevalent Dialysis Patients Per Million Population - Australia - 31 December 2021

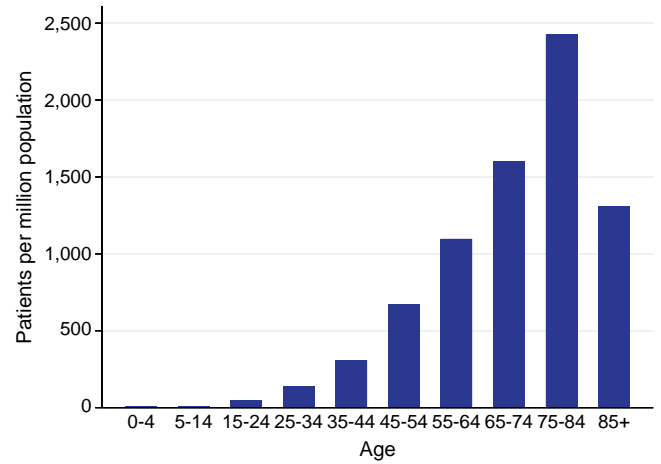


Figure 2.8.1 - Prevalent Dialysis Patient Numbers - New Zealand - 31 December 2021

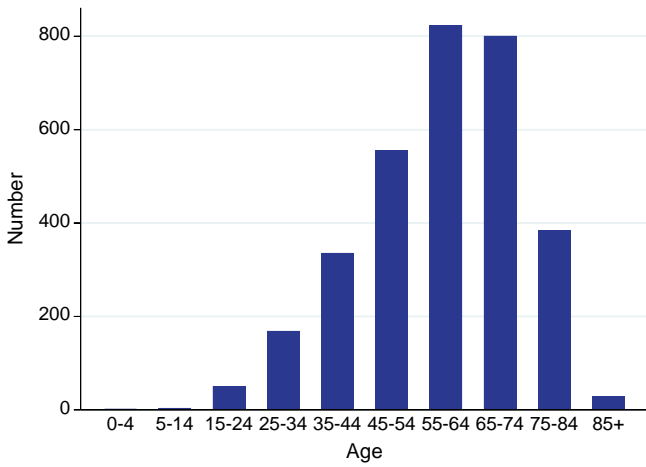


Figure 2.8.2 - Prevalent Dialysis Patients Per Million Population - New Zealand - 31 December 2021

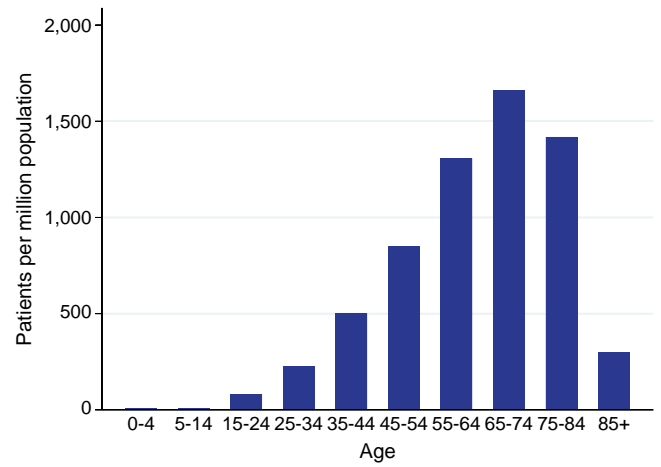


Figure 2.9 and table 2.8 show trends in the method and location of dialysis in Australia and New Zealand over 2017-2021.

Figure 2.9.1 - Method and Location of Dialysis - Australia, 2017-2021

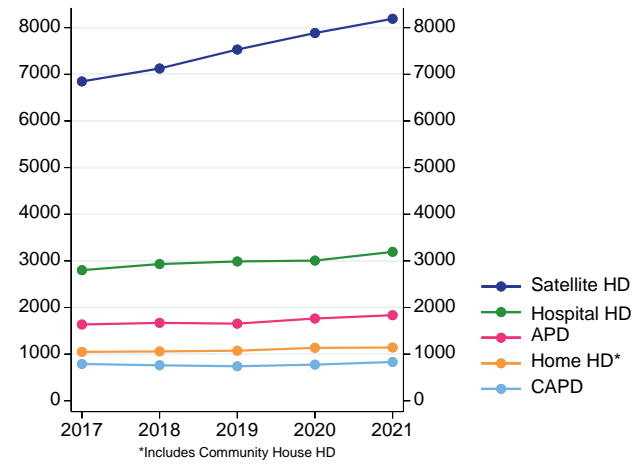


Figure 2.9.2 - Method and Location of Dialysis - New Zealand, 2017-2021

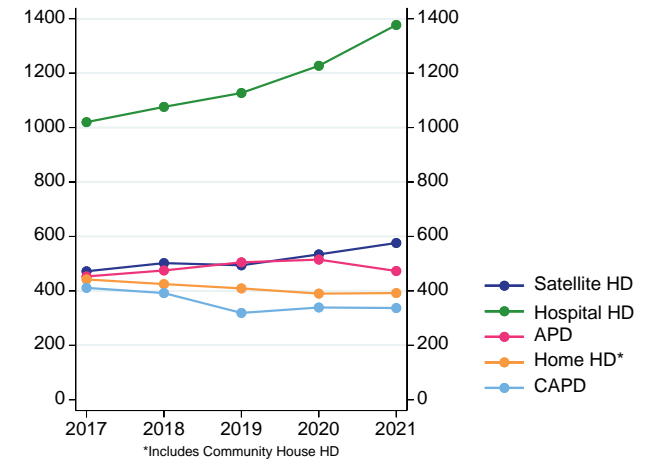


Table 2.8 Method and Location of Dialysis 2017-2021

Country	Dialysis type	Modality	2017	2018	2019	2020	2021		
Australia	PD	APD	1636 (67%)	1671 (69%)	1654 (69%)	1764 (69%)	1835 (69%)		
		CAPD	789 (33%)	761 (31%)	740 (31%)	775 (31%)	832 (31%)		
		Total	2425	2432	2394	2539	2667		
	HD	Hospital	2801 (26%)	2932 (26%)	2988 (26%)	3006 (25%)	3193 (25%)		
		Satellite	6847 (64%)	7125 (64%)	7531 (65%)	7885 (66%)	8191 (65%)		
		Home	1048 (10%)	1058 (10%)	1074 (9%)	1110 (9%)	1120 (9%)		
		Community House	0 (0%)	0 (0%)	0 (0%)	25 (0%)	22 (0%)		
		Total	10696	11115	11593	12026	12526		
		New Zealand	PD	APD	453 (52%)	475 (55%)	505 (61%)	515 (60%)	473 (58%)
				CAPD	411 (48%)	392 (45%)	319 (39%)	339 (40%)	337 (42%)
Total	864			867	824	854	810		
HD	Hospital		1020 (53%)	1076 (54%)	1127 (56%)	1227 (57%)	1377 (59%)		
	Satellite		472 (24%)	502 (25%)	494 (24%)	534 (25%)	576 (25%)		
	Home		442 (23%)	425 (21%)	409 (20%)	357 (17%)	362 (15%)		
	Community House		0 (0%)	0 (0%)	0 (0%)	33 (2%)	30 (1%)		
	Total		1934	2003	2030	2151	2345		

Co-morbidities

Figure 2.10 shows trends in the prevalence of co-morbidities (with 95% CIs) in prevalent KRT patients over the last 10 years.

Figure 2.10.1 - Comorbid Conditions at End of Year – Australia

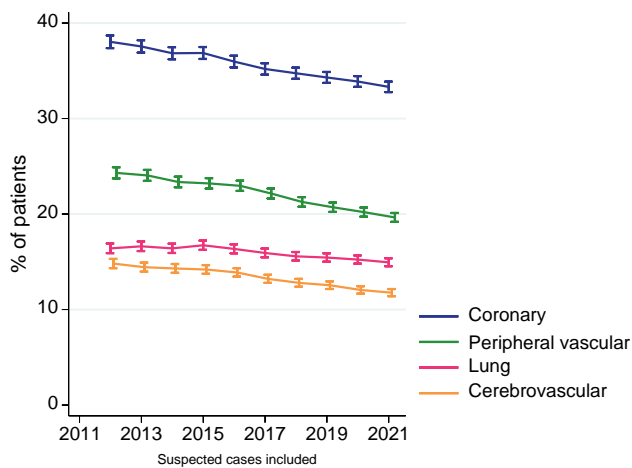


Figure 2.10.2 - Comorbid Conditions at End of Year - New Zealand

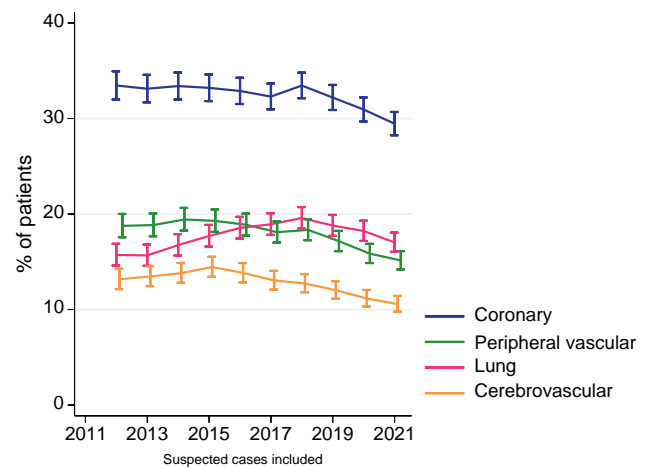
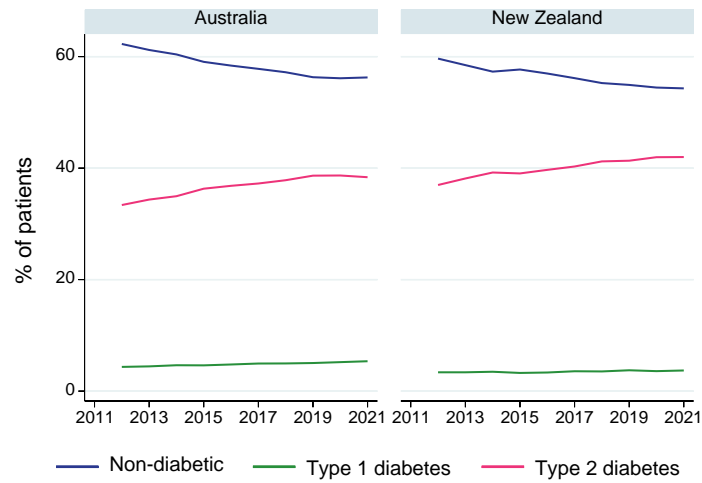


Figure 2.11 shows the prevalence of diabetes.

Figure 2.11 - Diabetes Status at End of Year



References

¹ Australian Bureau of Statistics, 2021, Quarterly Population Estimates (ERP), by State/Territory, Sex and Age, Jun 2021, viewed 22 Dec 2021, <https://www.abs.gov.au/statistics/people/population/national-state-and-territory-population/jun-2021>

² This work is based on/includes Stats NZ's data which are licensed by Stats NZ for re-use under the Creative Commons Attribution 4.0 International licence. Stats NZ, 2021, Estimated Resident Population by Age and Sex (1991+) (Annual-Jun), NZ Infoshare, viewed 5 Jan 2022, <http://infoshare.stats.govt.nz/>

³ Australian Bureau of Statistics, 2022, Regional Population by Age and Sex, Australia, 2021, viewed 14 Sep 2022, <https://www.abs.gov.au/statistics/people/population/regional-population-age-and-sex/2021>