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# 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 number of patients undertaking Kidney Replacement Therapy (KRT) in Australia and New Zealand continues to increase, reaching 29,271 people (1099 per million population) in Australia and 5572 (1064 per million population) in New Zealand in 2023. The greatest prevalence rate of KRT remains in older individuals with the highest prevalence rate of 2935 per million population among people aged 75-84 in Australia, and a prevalence rate of 2617 per million population in people aged 65-74 in New Zealand.

Kidney disease requiring KRT continues to disproportionately impact First Nations people. In Australia, the prevalence of dialysis amongst Aboriginal and Torres Strait Islander people is 2139 per million population compared with 512 per million population for people who are not of Aboriginal and Torres Strait Islander ethnicity. In New Zealand, the prevalence of dialysis in Māori people is 1019 per million population compared with 522 per million population in non-Māori People.

In both Australia and New Zealand, facility haemodialysis remains the most common dialysis modality, with satellite and hospital haemodialysis being the most common dialysis modality in each country respectively. There appears to be a trend of increasing proportion of patients with Type 2 diabetes in both countries, but a downward trend in the proportion of patients with vascular disease including coronary artery disease, peripheral vascular disease and cerebrovascular disease.

In 2023, the Registry started collection of data on patients receiving hybrid dialysis therapy as a modality of treatment, i.e. a combination of peritoneal dialysis and haemodialysis. There was a total of 26 patients reported as receiving hybrid dialysis therapy at the end of 2023 in Australia and New Zealand. As this is a newly collected variable, there may have been under-reporting in the number of hybrid therapy patients.

## SUGGESTED CITATION

E Au, C Davies, S Bateman, J Chen, P Clayton, K Hurst, F Kholmurodova, D Lee, H McCarthy, S McDonald, W Mulley, M Roberts, B Solomon, T Sun, G Irish. 47th Report, Chapter 2: Prevalence of Kidney Failure with Replacement Therapy. Australia and New Zealand Dialysis and Transplant Registry, Adelaide, Australia. 2024. Available at: <http://www.anzdata.org.au>

# ALL KIDNEY REPLACEMENT THERAPY MODALITIES

Table 5.1 shows the percentage of all dialysis patients undergoing peritoneal dialysis (PD) in each state and country 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, categorised by dialysis modality.

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 (2023)<sup>1</sup> and Stats NZ (2023)<sup>2</sup>.

**Table 2.1**  
**Prevalence (pmp) of Kidney Replacement Therapy 2004-2023**

Year	Australia			New Zealand		
	Dialysis	Transplant	Total	Dialysis	Transplant	Total
2004	8003 (402)	6382 (320)	14385 (722)	1774 (434)	1221 (299)	2995 (733)
2005	8638 (428)	6645 (329)	15283 (757)	1878 (454)	1245 (301)	3123 (755)
2006	9263 (453)	6978 (341)	16241 (794)	1997 (477)	1261 (301)	3258 (779)
2007	9733 (467)	7246 (348)	16979 (815)	2071 (490)	1306 (309)	3377 (800)
2008	10181 (479)	7659 (360)	17840 (840)	2106 (494)	1357 (319)	3463 (813)
2009	10487 (483)	8054 (371)	18541 (855)	2282 (530)	1411 (328)	3693 (858)
2010	10754 (488)	8510 (386)	19264 (874)	2389 (549)	1452 (334)	3841 (883)
2011	11112 (497)	8874 (397)	19986 (895)	2395 (546)	1493 (341)	3888 (887)
2012	11576 (509)	9271 (408)	20847 (917)	2475 (561)	1532 (348)	4007 (909)
2013	11903 (515)	9666 (418)	21569 (933)	2603 (586)	1583 (356)	4186 (942)
2014	12325 (525)	10072 (429)	22397 (954)	2692 (596)	1636 (362)	4328 (958)
2015	12645 (531)	10473 (440)	23118 (971)	2717 (589)	1713 (372)	4430 (961)
2016	12825 (530)	11038 (456)	23863 (986)	2772 (588)	1792 (380)	4564 (968)
2017	13125 (534)	11580 (471)	24705 (1005)	2799 (581)	1899 (395)	4698 (976)
2018	13553 (543)	12125 (486)	25678 (1029)	2864 (584)	1985 (405)	4849 (989)
2019	14006 (553)	12653 (499)	26659 (1052)	2840 (570)	2100 (422)	4940 (992)
2020	14596 (569)	12955 (505)	27551 (1074)	2971 (584)	2194 (431)	5165 (1015)
2021	15196 (592)	13151 (512)	28347 (1104)	3110 (608)	2279 (446)	5389 (1054)
2022	15444 (594)	13237 (509)	28681 (1103)	3114 (609)	2315 (452)	5429 (1061)
2023	15623 (586)	13648 (512)	29271 (1099)	3198 (611)	2374 (453)	5572 (1064)

**Table 2.2**  
**Prevalence (pmp) of Kidney Replacement Therapy by Modality 2019-2023**

Country	Patients	2019	2020	2021	2022	2023
Australia	<b>Total</b>	<b>26659 (1052)</b>	<b>27551 (1074)</b>	<b>28347 (1104)</b>	<b>28681 (1103)</b>	<b>29271 (1099)</b>
	Transplant	12653 (499)	12955 (505)	13151 (512)	13237 (509)	13648 (512)
	Dialysis	14006 (553)	14596 (569)	15196 (592)	15444 (594)	15623 (586)
	Percentage PD <sup>^</sup>	17%	17%	18%	17%	17%
	Percentage Home HD <sup>*</sup>	8%	8%	7%	7%	7%
	Percentage Facility HD	75%	75%	75%	76%	76%
New Zealand	<b>Total</b>	<b>4940 (992)</b>	<b>5165 (1015)</b>	<b>5389 (1054)</b>	<b>5429 (1061)</b>	<b>5572 (1064)</b>
	Transplant	2100 (422)	2194 (431)	2279 (446)	2315 (452)	2374 (453)
	Dialysis	2840 (570)	2971 (584)	3110 (608)	3114 (609)	3198 (611)
	Percentage PD <sup>^</sup>	29%	29%	26%	25%	23%
	Percentage Home HD <sup>*</sup>	14%	13%	13%	12%	12%
	Percentage Facility HD	57%	58%	61%	63%	65%

<sup>^</sup>Includes Hybrid Dialysis

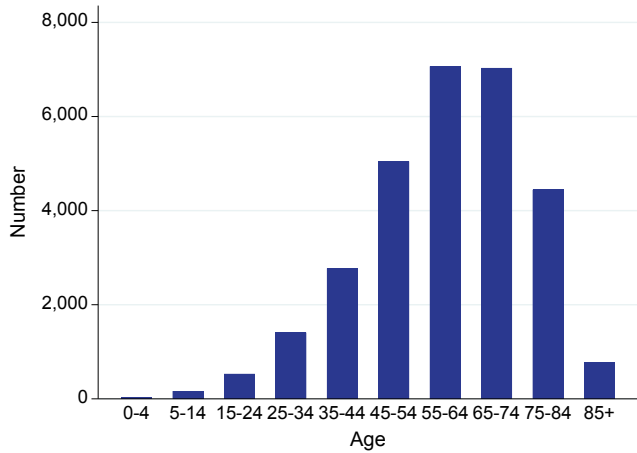
<sup>\*</sup>Includes Community House HD

Table 2.3 and Figures 2.1-2.2 show the 2023 prevalence (pmp) of KRT by age groups.

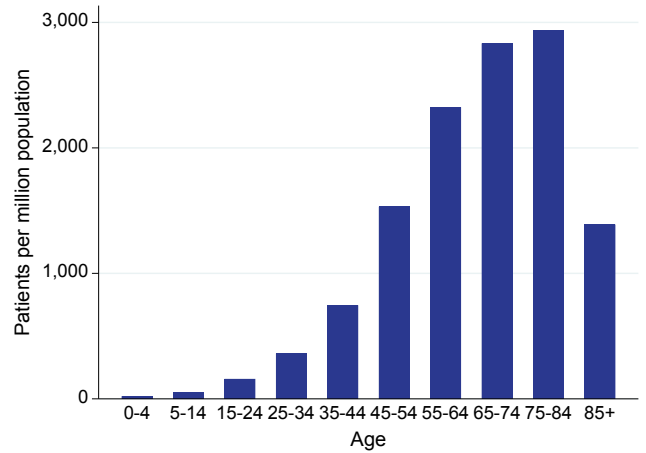
**Table 2.3**  
**Prevalence (pmp) of Kidney Replacement Therapy by Age 2023**

Age	Australia	New Zealand
<b>0-4</b>	32 (21)	7 (23)
<b>5-14</b>	165 (50)	35 (52)
<b>15-24</b>	531 (159)	124 (189)
<b>25-34</b>	1407 (360)	339 (443)
<b>35-44</b>	2772 (746)	651 (927)
<b>45-54</b>	5044 (1531)	1005 (1547)
<b>55-64</b>	7066 (2324)	1546 (2456)
<b>65-74</b>	7032 (2833)	1272 (2617)
<b>75-84</b>	4443 (2935)	543 (1913)
<b>85+</b>	779 (1389)	50 (527)

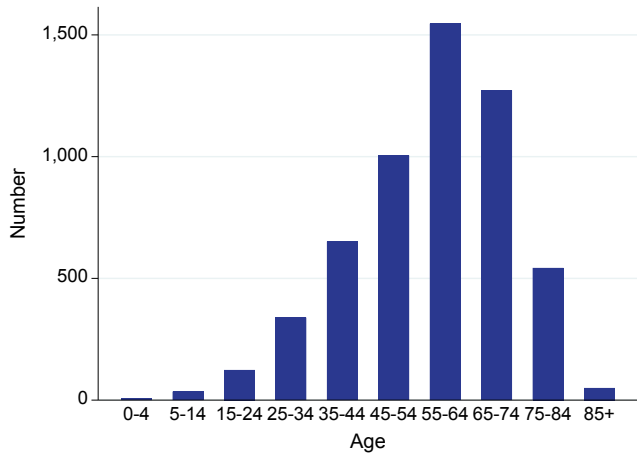
**Figure 2.1.1**  
**Prevalent KRT Patient Numbers - Australia - 31 December 2023**



**Figure 2.1.2**  
**Prevalent KRT Patients Per Million Population - Australia - 31 December 2023**



**Figure 2.2.1**  
**Prevalent KRT Patient Numbers - New Zealand - 31 December 2023**



**Figure 2.2.2**  
**Prevalent KRT Patients Per Million Population - New Zealand - 31 December 2023**

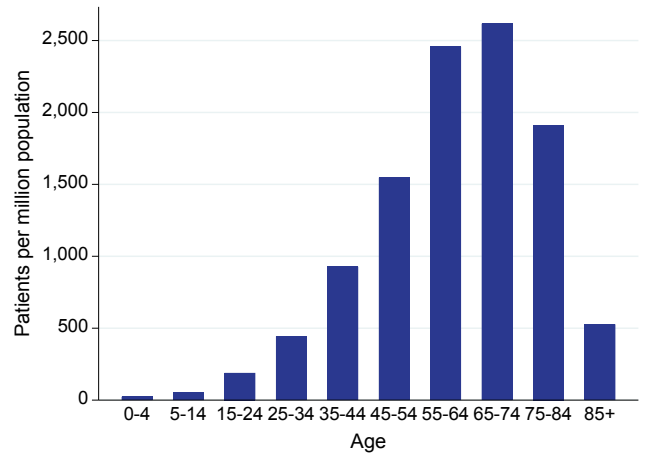


Table 2.4 shows the prevalence (pmp) of KRT by state/territory over 2019-2023. State is based on the state of the treating hospital.\*

\*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 (2024)<sup>3</sup>.

**Table 2.4**  
**Prevalence (pmp) of Kidney Replacement Therapy by State/Territory 2019-2023**

Modality	State	2019	2020	2021	2022	2023
Dialysis	QLD	2788 (548)	2939 (569)	3072 (589)	3166 (595)	3210 (588)
	NSW*	4210 (539)	4383 (557)	4550 (579)	4594 (580)	4585 (566)
	ACT*	291 (435)	299 (439)	314 (454)	328 (470)	320 (451)
	VIC	3290 (503)	3457 (523)	3570 (545)	3582 (540)	3655 (537)
	TAS	226 (413)	211 (378)	230 (405)	235 (412)	235 (410)
	SA	926 (524)	978 (546)	1012 (561)	1047 (575)	1076 (581)
	NT	785 (3184)	783 (3165)	799 (3220)	807 (3225)	800 (3169)
	WA	1490 (560)	1546 (570)	1649 (600)	1685 (604)	1742 (605)
	<b>Australia</b>	<b>14006 (553)</b>	<b>14596 (569)</b>	<b>15196 (592)</b>	<b>15444 (594)</b>	<b>15623 (586)</b>
	<b>New Zealand</b>	<b>2840 (570)</b>	<b>2971 (584)</b>	<b>3110 (608)</b>	<b>3114 (609)</b>	<b>3198 (611)</b>
	Transplant	QLD	2377 (467)	2415 (468)	2499 (479)	2497 (469)
NSW*		3577 (458)	3653 (464)	3691 (470)	3669 (463)	3778 (467)
ACT*		297 (444)	299 (439)	294 (426)	291 (417)	296 (417)
VIC		3683 (563)	3776 (571)	3800 (580)	3871 (584)	3982 (585)
TAS		300 (548)	308 (552)	310 (547)	321 (562)	328 (573)
SA		1089 (616)	1111 (621)	1136 (630)	1138 (625)	1156 (624)
NT		129 (523)	141 (570)	147 (592)	149 (595)	158 (626)
WA		1201 (452)	1252 (461)	1274 (463)	1301 (466)	1334 (463)
<b>Australia</b>		<b>12653 (499)</b>	<b>12955 (505)</b>	<b>13151 (512)</b>	<b>13237 (509)</b>	<b>13648 (512)</b>
<b>New Zealand</b>		<b>2100 (422)</b>	<b>2194 (431)</b>	<b>2279 (446)</b>	<b>2315 (452)</b>	<b>2374 (453)</b>

\*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 2019-2023**

Ethnicity	Modality	2019	2020	2021	2022	2023
Aboriginal and/or Torres Strait Islander	Dialysis	2116 (2226)	2155 (2228)	2188 (2224)	2196 (2191)	2185 (2139)
	Transplant	350 (368)	379 (392)	402 (409)	415 (414)	459 (449)
Other	Dialysis	11566 (474)	12135 (492)	12695 (514)	12941 (517)	13118 (512)
	Transplant	11408 (468)	11661 (472)	11834 (479)	11898 (476)	12250 (478)
Not reported	Dialysis	324	306	313	307	320
	Transplant	895	915	915	924	939

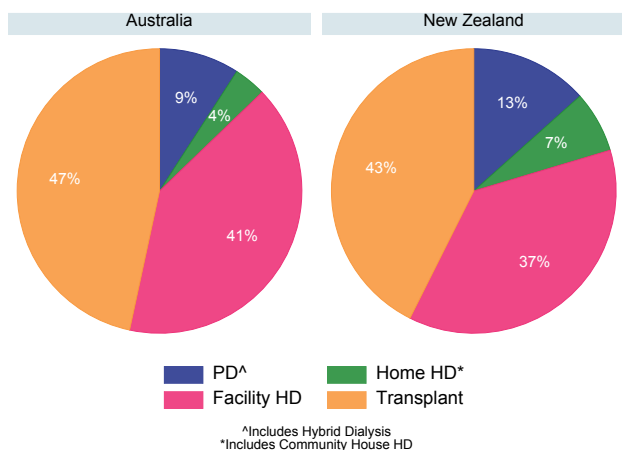
**Table 2.6**  
**Prevalence (pmp) of Kidney Replacement Therapy by Ethnicity, New Zealand 2019-2023**

Ethnicity	Modality	2019	2020	2021	2022	2023
Māori	Dialysis	920 (1104)	961 (1125)	974 (1113)	937 (1052)	921 (1019)
	Transplant	252 (302)	267 (312)	283 (323)	296 (332)	312 (345)
Other	Dialysis	1912 (461)	1992 (470)	2120 (500)	2161 (511)	2260 (522)
	Transplant	1843 (445)	1920 (453)	1987 (469)	2011 (476)	2052 (474)
Not reported	Dialysis	8	18	16	16	17
	Transplant	5	7	9	8	10

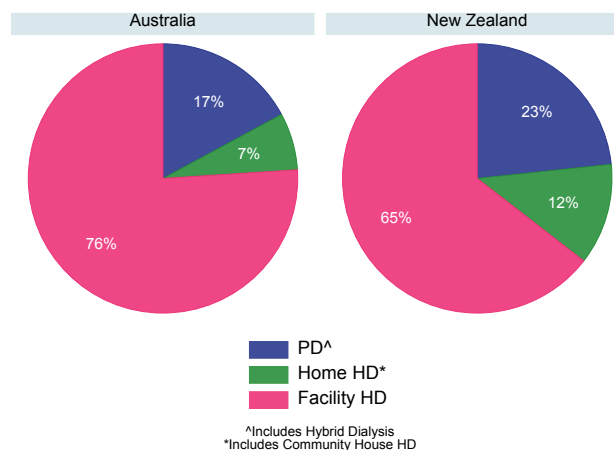


Figure 2.3 shows the overall distribution of KRT modality by country at the end of 2023. The dialysis modalities are shown separately in Figure 2.4.

**Figure 2.3**  
**KRT Modality by Country 2023**

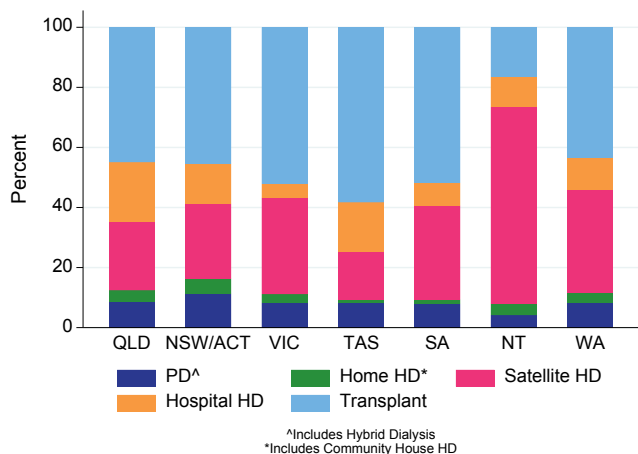


**Figure 2.4**  
**Dialysis Modality by Country 2023**

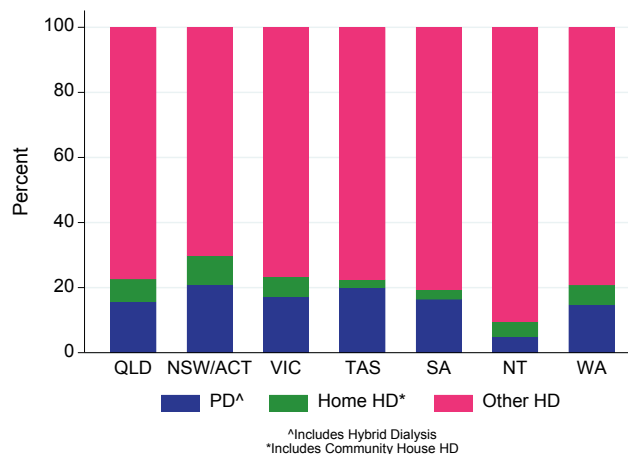


Figures 2.5 and 2.6 show the same data by Australian state/territory.

**Figure 2.5**  
**KRT Modality by State/Territory - 31 December 2023**



**Figure 2.6**  
**Dialysis Modality by State/Territory - 31 December 2023**



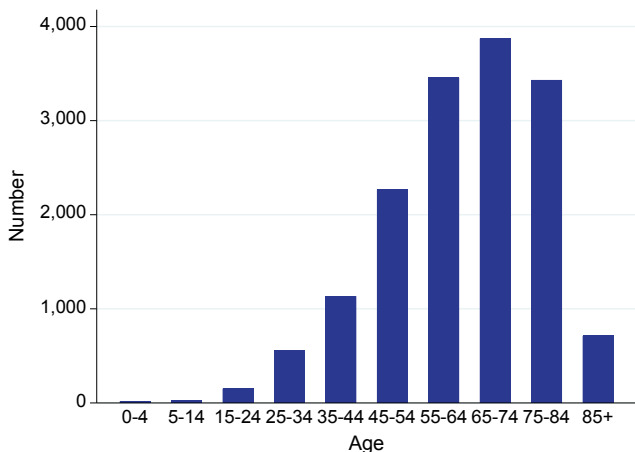
# DIALYSIS

Table 2.7 and Figures 2.7-2.8 show the age distribution of prevalent dialysis patients in 2023.

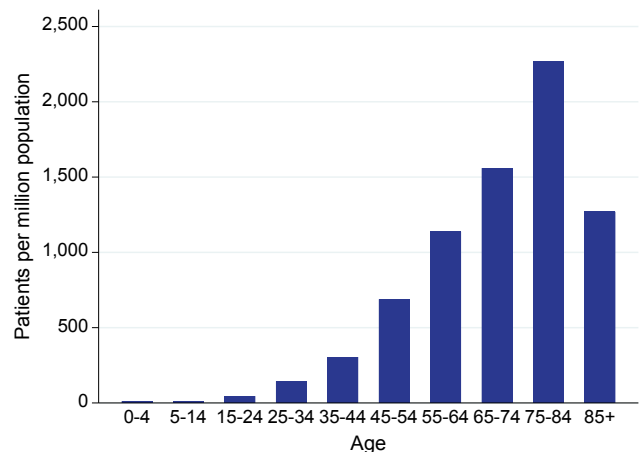
**Figure 2.7**  
**Dialysis Prevalence (pmp) by Age - 2023**

Age	Australia	New Zealand
0-4	17 (11)	4 (13)
5-14	22 (7)	2 (3)
15-24	152 (45)	58 (89)
25-34	560 (143)	168 (220)
35-44	1134 (305)	332 (473)
45-54	2268 (688)	565 (870)
55-64	3455 (1136)	845 (1342)
65-74	3871 (1560)	789 (1623)
75-84	3432 (2267)	395 (1391)
85+	712 (1270)	40 (421)

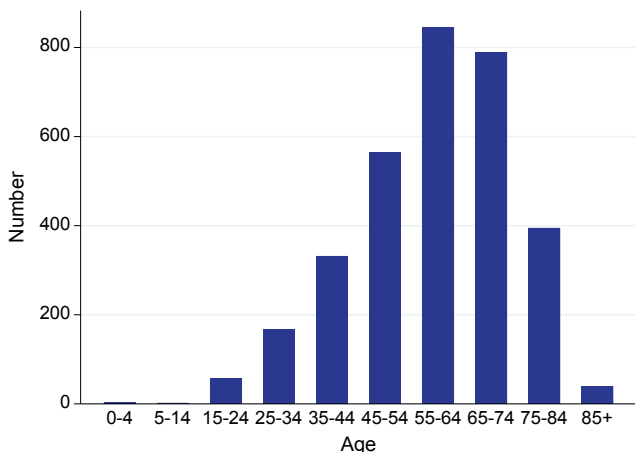
**Figure 2.7.1**  
**Prevalent Dialysis Patient Numbers - Australia - 31 December 2023**



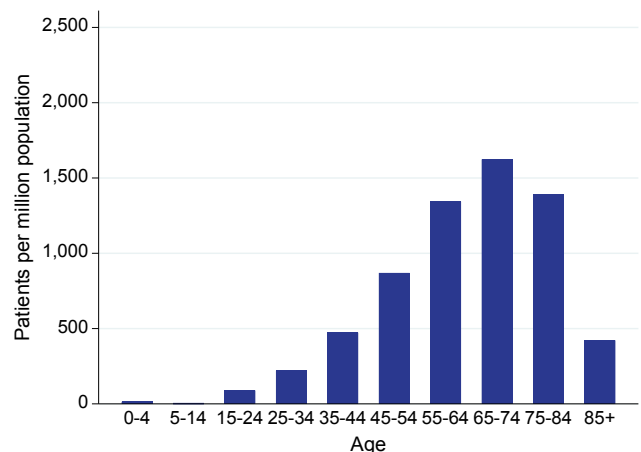
**Figure 2.7.2**  
**Prevalent Dialysis Patients Per Million Population - Australia - 31 December 2023**



**Figure 2.8.1**  
**Prevalent Dialysis Patient Numbers - New Zealand - 31 December 2023**



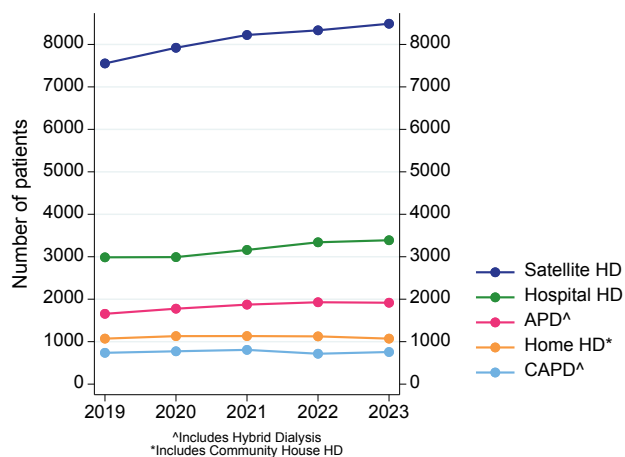
**Figure 2.8.2**  
**Prevalent Dialysis Patients Per Million Population - New Zealand - 31 December 2023**



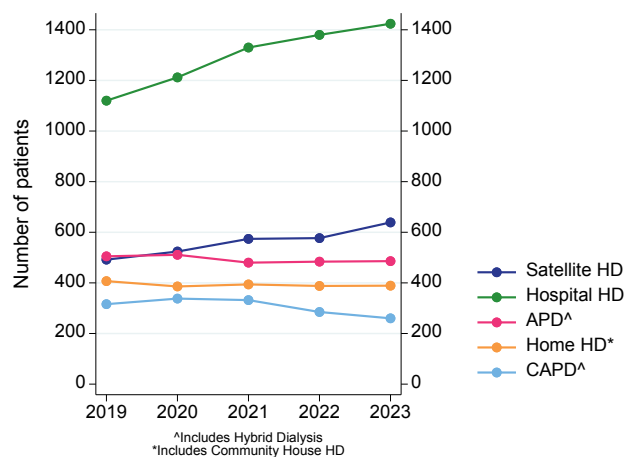
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Figure 2.9 and Table 2.8 show trends in the method and location of dialysis in Australia and New Zealand over 2019-2023.

**Figure 2.9.1**  
**Method and Location of Dialysis - Australia, 2019-2023**



**Figure 2.9.2**  
**Method and Location of Dialysis - New Zealand, 2019-2023**



**Table 2.8**  
**Method and Location of Dialysis 2019-2023**

Country	Dialysis type	Modality	2019	2020	2021	2022	2023
Australia	PD	APD	1656 (69%)	1777 (70%)	1873 (70%)	1929 (73%)	1900 (72%)
		CAPD	738 (31%)	774 (30%)	807 (30%)	716 (27%)	753 (28%)
		<b>Total</b>	<b>2394</b>	<b>2551</b>	<b>2680</b>	<b>2645</b>	<b>2653</b>
	HD	Hospital	2987 (26%)	2992 (25%)	3161 (25%)	3341 (26%)	3389 (26%)
		Satellite	7553 (65%)	7922 (66%)	8223 (66%)	8333 (65%)	8488 (66%)
		Home	1072 (9%)	1106 (9%)	1112 (9%)	1115 (9%)	1065 (8%)
		Community House*	-	25 (0%)	20 (0%)	10 (0%)	7 (0%)
		<b>Total</b>	<b>11612</b>	<b>12045</b>	<b>12516</b>	<b>12799</b>	<b>12949</b>
	Hybrid	Hybrid Dialysis^	-	-	-	-	21
	New Zealand	PD	APD	505 (62%)	511 (60%)	480 (59%)	484 (63%)
CAPD			316 (38%)	338 (40%)	332 (41%)	285 (37%)	258 (35%)
<b>Total</b>			<b>821</b>	<b>849</b>	<b>812</b>	<b>769</b>	<b>741</b>
HD		Hospital	1120 (55%)	1212 (57%)	1330 (58%)	1380 (59%)	1424 (58%)
		Satellite	492 (24%)	524 (25%)	574 (25%)	577 (25%)	639 (26%)
		Home	407 (20%)	354 (17%)	366 (16%)	356 (15%)	350 (14%)
	Community House*	-	32 (2%)	28 (1%)	32 (1%)	39 (2%)	
<b>Total</b>	<b>2019</b>	<b>2122</b>	<b>2298</b>	<b>2345</b>	<b>2452</b>		
Hybrid	Hybrid Dialysis^	-	-	-	-	5	

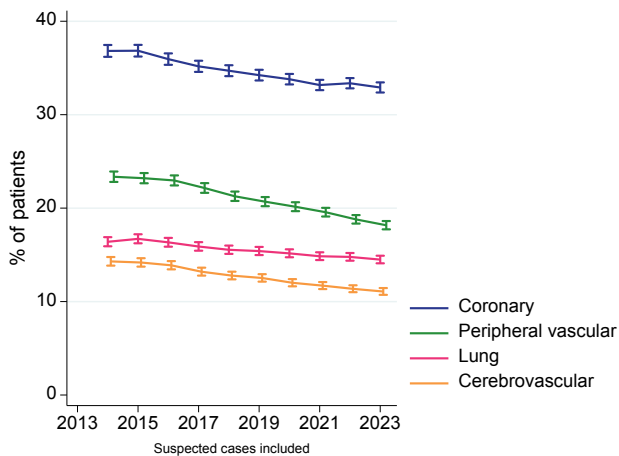
\*Community House was collected from 2020 onwards, as a modality of treatment

^Hybrid Dialysis (combined concurrent peritoneal dialysis and haemodialysis) was collected from 2023 onwards, as a modality of treatment

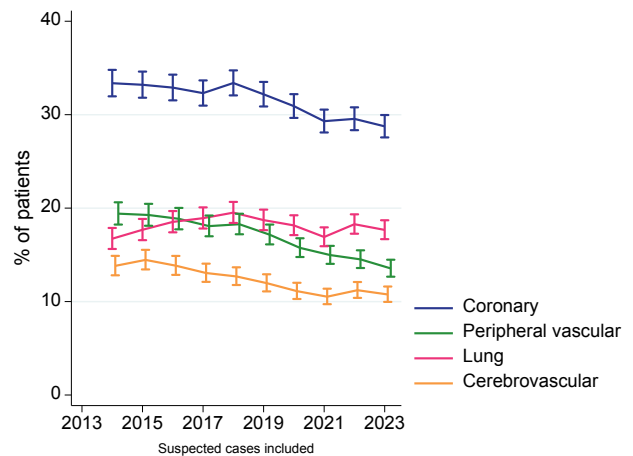
# CO-MORBIDITIES

Figure 2.10 shows trends in the prevalence of co-morbidities (with 95% CIs) in prevalent KRT patients over the last 10 years. Figure 2.11 shows the prevalence of diabetes.

**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**  
**Diabetes Status at End of Year**

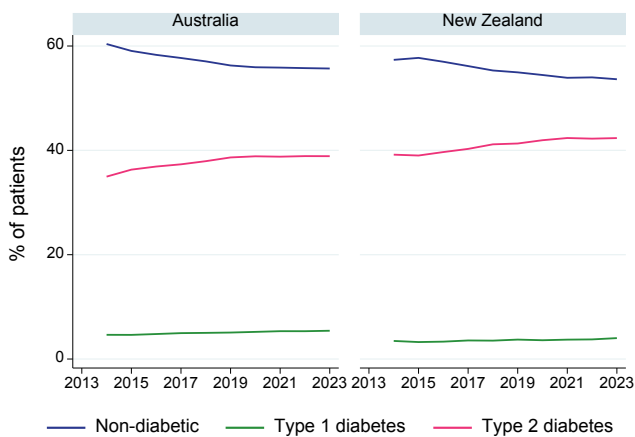


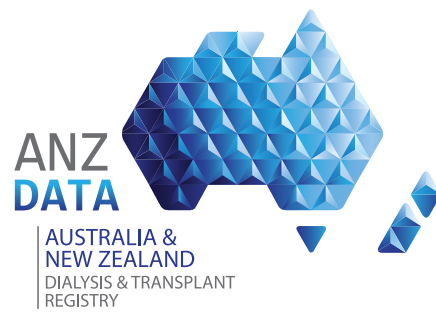
Table 2.9 shows the number of dialysis patients in Australia and New Zealand diagnosed with Calciphylaxis in a survey year, since collection started in 2019.

**Table 2.9**  
**Calciphylaxis Reported in Dialysis Patients, 2019-2023**

Country	Dialysis Modality	2019	2020	2021	2022	2023
Australia	HD	44	61	64	54	60
	PD	12	4	7	13	5
New Zealand	HD	14	13	16	32	26
	PD	7	6	5	7	10

## REFERENCES

1. Australian Bureau of Statistics, 2023, Quarterly Population Estimates (ERP), by State/Territory, Sex and Age, Jun 2023, viewed 14 Dec 2023, <https://www.abs.gov.au/statistics/people/population/national-state-and-territory-population/jun-2023>
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, 2023, Estimated Resident Population by Age and Sex (1991+) (Annual-Jun), NZ Infoshare, viewed 14 Dec 2023, <http://infoshare.stats.govt.nz/>
3. Australian Bureau of Statistics, 2024, Regional Population by Age and Sex, Australia, 2023, viewed 28 Sep 2023, <https://www.abs.gov.au/statistics/people/population/regional-population-age-and-sex/2022>



# CHAPTER 2

Prevalence of Kidney Failure with  
Replacement Therapy