



# CHAPTER 5

## Peritoneal Dialysis

*Reporting the incidence, prevalence and survival of peritoneal dialysis patients in Australia and New Zealand; summarising dialysis fluids, laboratory results, rates of technique and peritonitis*

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## Summary and Highlights

During the 2020 survey period 1,228 people in Australia and 383 in New Zealand commenced long term peritoneal dialysis therapy. Coinciding with the start of the COVID-19 pandemic in 2020, the number of patients treated with peritoneal dialysis (PD) receiving a kidney transplant fell in Australia from 328 in 2019 to 233 in 2020. Together these factors resulted in the highest number of prevalent PD patient in Australia of any survey period (2,544, compared to 2,393 in 2019). In New Zealand the number of prevalent PD patients has remained relative stable of the last few years (854 in 2020).

The proportion of people receiving home dialysis on peritoneal dialysis was 69% in both Australia and New Zealand and the total percentage of the dialysis population receiving peritoneal dialysis has progressively fallen and is now only 17% in Australia and 28% in New Zealand.

When considering all people who started peritoneal dialysis within a year of commencing renal replacement therapy, the proportion of people surviving at 3 years was 73% in Australia and 65% in New Zealand. Patient survival and technique survival curves have remained relatively unchanged in recent eras. Technique survival at 3-years (censored for transplantation) remains low at only 38% in both Australia and New Zealand. The primary cause of technique failure in both countries was patient death (26% in Australia and 34% in New Zealand), followed by inadequate dialysis in Australia (21%) and infective complications in New Zealand (22%).

ANZDATA only reports on Australian peritoneal dialysis episodes of peritonitis, as New Zealand has a separate registry that is not currently linked to ANZDATA. In Australia, the overall peritonitis rate has plateaued, however there remains significant variation between individual states and treating hospitals from 0.11 to 0.49 PD peritonitis episodes per year. The proportion of infections that are culture negative is above 20% and was higher in 2019 and 2020 than in preceding years.

Of the people for whom peritoneal dialysis fluid usage was reported in 2020, 45% of Australian people were using icodextrin compared to 64% of people in New Zealand. Only 22% of peritoneal dialysis patients in Australia and 9% in New Zealand are using low GDP solutions despite evidence that they preserve residual kidney function and a level 1A recommendation by the ISPD guidelines that they are used for this purpose. Automated peritoneal dialysis (APD) remained the most common modality of peritoneal dialysis for prevalent patients in both Australia (69%) and New Zealand (59%) with the remainder receiving continuous ambulatory peritoneal dialysis (CAPD).

## Suggested Citation

ANZDATA Registry. 44th Report, Chapter 5: Peritoneal dialysis. Australia and New Zealand Dialysis and Transplant Registry, Adelaide, Australia. 2021. Available at: <http://www.anzdata.org.au>

## Incidence, Prevalence and Usage

Table 5.1 shows the proportion of all dialysis patients undergoing peritoneal dialysis (PD) in each state and country over 2016-2020. Table 5.2 shows the same data as a proportion of home dialysis (including community house haemodialysis) patients.

The duration of time spent on PD by prevalent patients is shown in figure 5.1.

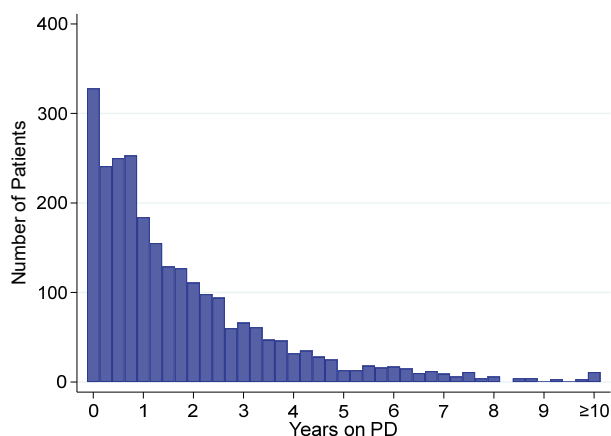
**Table 5.1 Percentage of all Dialysis Patients on Peritoneal Dialysis**

| State                        | 2016       | 2017       | 2018       | 2019       | 2020       |
|------------------------------|------------|------------|------------|------------|------------|
| Queensland                   | 18%        | 18%        | 18%        | 17%        | 16%        |
| New South Wales              | 24%        | 24%        | 23%        | 22%        | 23%        |
| Australian Capital Territory | 10%        | 9%         | 9%         | 12%        | 15%        |
| Victoria                     | 20%        | 19%        | 18%        | 17%        | 17%        |
| Tasmania                     | 22%        | 19%        | 12%        | 14%        | 17%        |
| South Australia              | 16%        | 14%        | 15%        | 14%        | 14%        |
| Northern Territory           | 4%         | 3%         | 4%         | 6%         | 7%         |
| Western Australia            | 15%        | 15%        | 15%        | 14%        | 15%        |
| <b>Australia</b>             | <b>19%</b> | <b>18%</b> | <b>18%</b> | <b>17%</b> | <b>17%</b> |
| <b>New Zealand</b>           | <b>30%</b> | <b>31%</b> | <b>30%</b> | <b>29%</b> | <b>28%</b> |

**Table 5.2 Percentage of all Home Dialysis Patients on Peritoneal Dialysis**

| State                        | 2016       | 2017       | 2018       | 2019       | 2020       |
|------------------------------|------------|------------|------------|------------|------------|
| Queensland                   | 62%        | 64%        | 64%        | 64%        | 66%        |
| New South Wales              | 68%        | 70%        | 69%        | 69%        | 69%        |
| Australian Capital Territory | 52%        | 55%        | 52%        | 56%        | 63%        |
| Victoria                     | 75%        | 76%        | 77%        | 75%        | 72%        |
| Tasmania                     | 70%        | 79%        | 68%        | 74%        | 81%        |
| South Australia              | 81%        | 81%        | 80%        | 78%        | 83%        |
| Northern Territory           | 38%        | 38%        | 48%        | 57%        | 48%        |
| Western Australia            | 68%        | 69%        | 69%        | 69%        | 69%        |
| <b>Australia</b>             | <b>68%</b> | <b>70%</b> | <b>70%</b> | <b>69%</b> | <b>69%</b> |
| <b>New Zealand</b>           | <b>64%</b> | <b>66%</b> | <b>67%</b> | <b>67%</b> | <b>69%</b> |

**Figure 5.1.1 - Time on Peritoneal Dialysis - Prevalent PD Patients Australia 31 Dec 2020**



**Figure 5.1.2 - Time on Peritoneal Dialysis - Prevalent PD Patients New Zealand 31 Dec 2020**

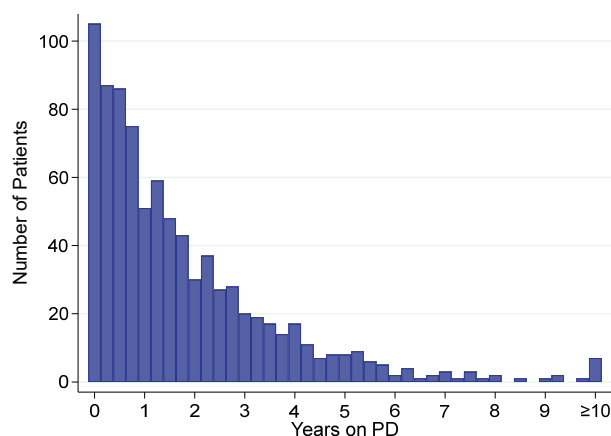
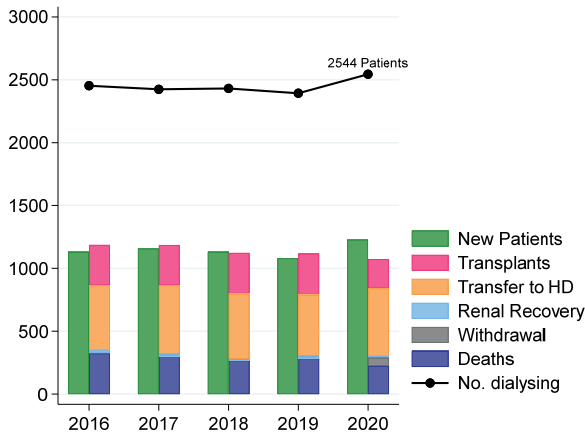


Table 5.3 shows the overall incidence, cessation and annual prevalence of PD in Australia and New Zealand over the last 5 years. Note that dialysis modality changes lasting less than 30 days are not included. Figure 5.2 presents some of these data graphically.

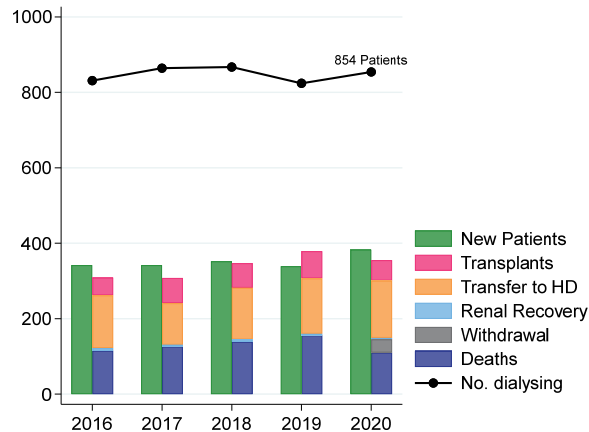
**Table 5.3 Incidence, Cessation and Annual Prevalence of Peritoneal Dialysis Patients 2016 - 2020**

| Country                                    |   | 2016        | 2017        | 2018        | 2019        | 2020        |
|--|---|-------------|-------------|-------------|-------------|-------------|
| Australia                                  | <b>All patients who commenced PD</b>                        |             |             |             |             |             |
|  | First dialysis treatment or returning after kidney recovery | 822         | 819         | 802         | 761         | 898         |
|  | Transfer from HD (no prior PD)                              | 242         | 252         | 245         | 261         | 255         |
|  | Transfer from HD (prior PD)                                 | 33          | 44          | 43          | 33          | 34          |
|  | Failed Transplant (no prior PD)                             | 17          | 22          | 22          | 13          | 14          |
|  | Failed Transplant (prior PD)                                | 17          | 21          | 19          | 12          | 27          |
|  | <b>Total</b>  | <b>1131</b> | <b>1158</b> | <b>1131</b> | <b>1080</b> | <b>1228</b> |
|  | <b>All patients who ceased PD</b>                           |             |             |             |             |             |
|  | Received kidney transplant                                  | 322         | 321         | 326         | 328         | 233         |
|  | Transfer to HD  | 517         | 546         | 519         | 486         | 541         |
|  | Kidney recovery   | 23          | 17          | 10          | 17          | 11          |
| Withdrawal                                 | 0   | 0           | 0           | 0           | 65          |             |
| Deaths                                     | 325   | 302         | 269         | 286         | 224         |             |
| <b>Total</b>                               | <b>1187</b>   | <b>1186</b> | <b>1124</b> | <b>1117</b> | <b>1074</b> |             |
| <b>Total patients on PD at 31 December</b> | <b>2453</b>   | <b>2424</b> | <b>2431</b> | <b>2393</b> | <b>2544</b> |             |
| New Zealand                                | <b>All patients who commenced PD</b>                        |             |             |             |             |             |
|  | First dialysis treatment or returning after kidney recovery | 219         | 226         | 231         | 241         | 270         |
|  | Transfer from HD (no prior PD)                              | 96          | 96          | 85          | 77          | 79          |
|  | Transfer from HD (prior PD)                                 | 15          | 18          | 21          | 11          | 24          |
|  | Failed Transplant (no prior PD)                             | 4           | 1           | 8           | 6           | 4           |
|  | Failed Transplant (prior PD)                                | 8           | 1           | 7           | 4           | 6           |
|  | <b>Total</b>  | <b>342</b>  | <b>342</b>  | <b>352</b>  | <b>339</b>  | <b>383</b>  |
|  | <b>All patients who ceased PD</b>                           |             |             |             |             |             |
|  | Received kidney transplant                                  | 47          | 67          | 65          | 72          | 54          |
|  | Transfer to HD  | 140         | 110         | 137         | 147         | 152         |
|  | Kidney recovery   | 7           | 5           | 6           | 4           | 4           |
| Withdrawal                                 | 0   | 0           | 0           | 0           | 35          |             |
| Deaths                                     | 115   | 126         | 139         | 156         | 110         |             |
| <b>Total</b>                               | <b>309</b>  | <b>308</b>  | <b>347</b>  | <b>379</b>  | <b>355</b>  |             |
| <b>Total patients on PD at 31 December</b> | <b>831</b>  | <b>864</b>  | <b>867</b>  | <b>824</b>  | <b>854</b>  |             |

**Figure 5.2.1 - Incidence, Cessation and Annual Prevalence of Peritoneal Dialysis Patients - Australia 2016-2020**

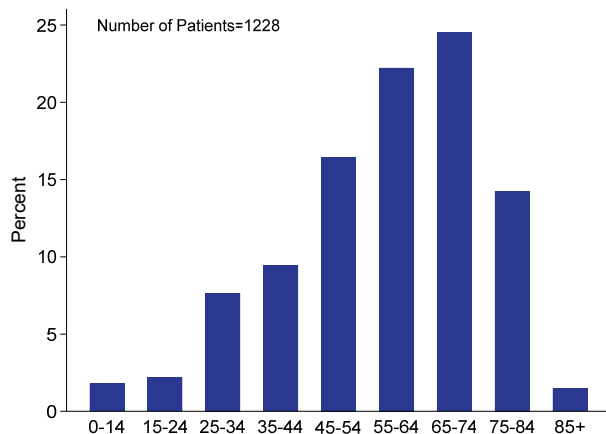


**Figure 5.2.2 - Incidence, Cessation and Annual Prevalence of Peritoneal Dialysis Patients - New Zealand 2016-2020**

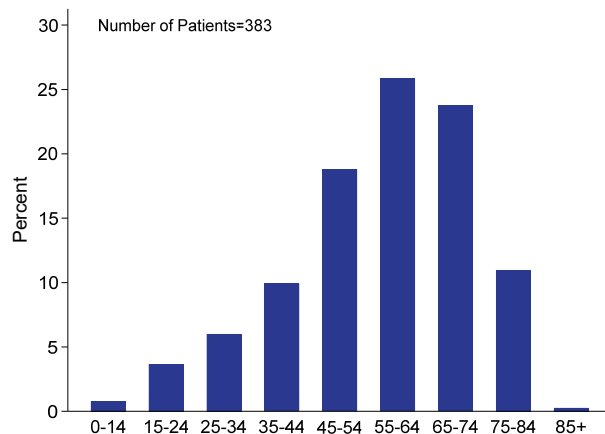


The age distributions of incident and prevalent PD patients are shown in figures 5.3 and 5.4 respectively.

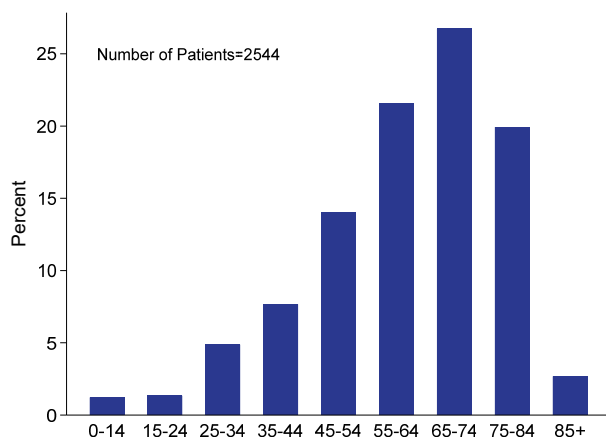
**Figure 5.3.1 - Age (%) of New Peritoneal Dialysis Patients - Australia 2020**



**Figure 5.3.2 - Age (%) of New Peritoneal Dialysis Patients - New Zealand 2020**



**Figure 5.4.1 - Age (%) of Current Peritoneal Dialysis Patients - Australia 2020**



**Figure 5.4.2 - Age (%) of Current Peritoneal Dialysis Patients - New Zealand 2020**

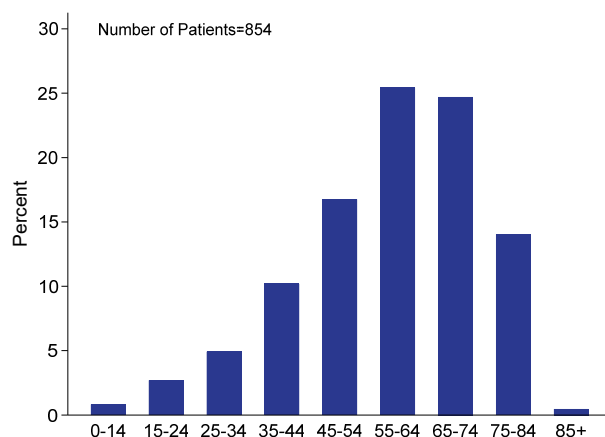


Table 5.4 presents the number and proportion of incident and prevalent peritoneal dialysis patients by age group.

**Table 5.4.1 Incident and Prevalent PD patients by Age Group - Australia**

| Category           | Age group    | 2016        | 2017        | 2018        | 2019        | 2020        |
|--------------------|--------------|-------------|-------------|-------------|-------------|-------------|
| Incident Patients  | 0-14         | 22 (2%)     | 29 (3%)     | 19 (2%)     | 19 (2%)     | 22 (2%)     |
|                    | 15-24        | 42 (4%)     | 31 (3%)     | 34 (3%)     | 24 (2%)     | 27 (2%)     |
|                    | 25-34        | 58 (5%)     | 73 (6%)     | 66 (6%)     | 74 (7%)     | 94 (8%)     |
|                    | 35-44        | 123 (11%)   | 126 (11%)   | 129 (11%)   | 104 (10%)   | 116 (9%)    |
|                    | 45-54        | 203 (18%)   | 195 (17%)   | 169 (15%)   | 198 (18%)   | 202 (16%)   |
|                    | 55-64        | 245 (22%)   | 266 (23%)   | 232 (21%)   | 244 (23%)   | 273 (22%)   |
|                    | 65-74        | 276 (24%)   | 275 (24%)   | 316 (28%)   | 263 (24%)   | 301 (25%)   |
|                    | 75-84        | 150 (13%)   | 150 (13%)   | 149 (13%)   | 142 (13%)   | 175 (14%)   |
|                    | 85+          | 12 (1%)     | 13 (1%)     | 17 (2%)     | 12 (1%)     | 18 (1%)     |
|                    | <b>Total</b> | <b>1131</b> | <b>1158</b> | <b>1131</b> | <b>1080</b> | <b>1228</b> |
| Prevalent Patients | 0-14         | 30 (1%)     | 32 (1%)     | 23 (1%)     | 22 (1%)     | 31 (1%)     |
|                    | 15-24        | 47 (2%)     | 42 (2%)     | 41 (2%)     | 31 (1%)     | 34 (1%)     |
|                    | 25-34        | 103 (4%)    | 108 (4%)    | 96 (4%)     | 106 (4%)    | 124 (5%)    |
|                    | 35-44        | 185 (8%)    | 202 (8%)    | 205 (8%)    | 196 (8%)    | 195 (8%)    |
|                    | 45-54        | 340 (14%)   | 353 (15%)   | 341 (14%)   | 339 (14%)   | 356 (14%)   |
|                    | 55-64        | 521 (21%)   | 524 (22%)   | 520 (21%)   | 521 (22%)   | 549 (22%)   |
|                    | 65-74        | 684 (28%)   | 624 (26%)   | 652 (27%)   | 638 (27%)   | 680 (27%)   |
|                    | 75-84        | 477 (19%)   | 470 (19%)   | 486 (20%)   | 477 (20%)   | 507 (20%)   |
|                    | 85+          | 66 (3%)     | 69 (3%)     | 67 (3%)     | 63 (3%)     | 68 (3%)     |
|                    | <b>Total</b> | <b>2453</b> | <b>2424</b> | <b>2431</b> | <b>2393</b> | <b>2544</b> |

**Table 5.4.2 Incident and Prevalent PD patients by Age Group - New Zealand**

| Category           | Age group    | 2016      | 2017       | 2018       | 2019       | 2020       |
|--------------------|--------------|-----------|------------|------------|------------|------------|
| Incident Patients  | 0-14         | 9 (3%)    | 7 (2%)     | 7 (2%)     | 5 (1%)     | 3 (1%)     |
|                    | 15-24        | 11 (3%)   | 9 (3%)     | 3 (1%)     | 7 (2%)     | 14 (4%)    |
|                    | 25-34        | 18 (5%)   | 25 (7%)    | 31 (9%)    | 29 (9%)    | 23 (6%)    |
|                    | 35-44        | 39 (11%)  | 31 (9%)    | 30 (9%)    | 32 (9%)    | 38 (10%)   |
|                    | 45-54        | 64 (19%)  | 63 (18%)   | 70 (20%)   | 71 (21%)   | 72 (19%)   |
|                    | 55-64        | 82 (24%)  | 81 (24%)   | 81 (23%)   | 94 (28%)   | 99 (26%)   |
|                    | 65-74        | 77 (23%)  | 97 (28%)   | 93 (26%)   | 71 (21%)   | 91 (24%)   |
|                    | 75-84        | 40 (12%)  | 29 (8%)    | 36 (10%)   | 30 (9%)    | 42 (11%)   |
|                    | 85+          | 2 (1%)    | 0 (0%)     | 1 (0%)     | 0 (0%)     | 1 (0%)     |
|                    | <b>Total</b> |           | <b>342</b> | <b>342</b> | <b>352</b> | <b>339</b> |
| Prevalent Patients | 0-14         | 10 (1%)   | 13 (2%)    | 15 (2%)    | 11 (1%)    | 7 (1%)     |
|                    | 15-24        | 19 (2%)   | 19 (2%)    | 14 (2%)    | 16 (2%)    | 23 (3%)    |
|                    | 25-34        | 37 (4%)   | 48 (6%)    | 46 (5%)    | 43 (5%)    | 42 (5%)    |
|                    | 35-44        | 83 (10%)  | 84 (10%)   | 77 (9%)    | 79 (10%)   | 87 (10%)   |
|                    | 45-54        | 143 (17%) | 142 (16%)  | 151 (17%)  | 145 (18%)  | 143 (17%)  |
|                    | 55-64        | 204 (25%) | 207 (24%)  | 204 (24%)  | 212 (26%)  | 217 (25%)  |
|                    | 65-74        | 220 (26%) | 234 (27%)  | 230 (27%)  | 200 (24%)  | 211 (25%)  |
|                    | 75-84        | 107 (13%) | 111 (13%)  | 125 (14%)  | 114 (14%)  | 120 (14%)  |
|                    | 85+          | 8 (1%)    | 6 (1%)     | 5 (1%)     | 4 (0%)     | 4 (0%)     |
|                    | <b>Total</b> |           | <b>831</b> | <b>864</b> | <b>867</b> | <b>824</b> |

Table 5.5 presents the number and proportion of incident peritoneal dialysis patients by primary kidney disease.

**Table 5.5.1 Incident PD Patients by Primary Disease - Australia**

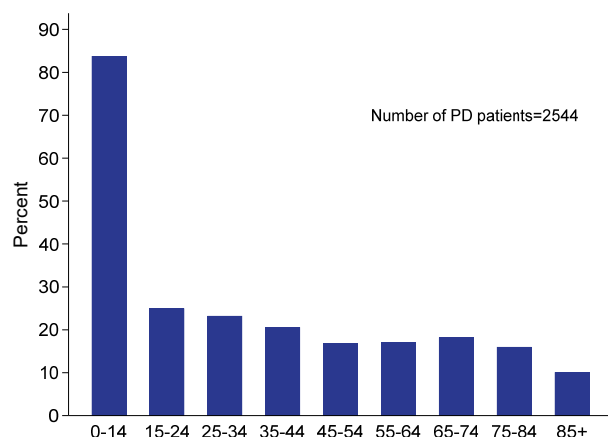
| Primary Kidney Disease  | 2016        | 2017        | 2018        | 2019        | 2020        |
|-------------------------|-------------|-------------|-------------|-------------|-------------|
| Diabetic Kidney Disease | 370 (33%)   | 402 (35%)   | 368 (33%)   | 375 (35%)   | 399 (32%)   |
| Glomerulonephritis      | 280 (25%)   | 259 (22%)   | 299 (26%)   | 259 (24%)   | 299 (24%)   |
| Hypertension            | 162 (14%)   | 144 (12%)   | 146 (13%)   | 139 (13%)   | 126 (10%)   |
| Polycystic Disease      | 63 (6%)     | 81 (7%)     | 74 (7%)     | 62 (6%)     | 67 (5%)     |
| Reflux Nephropathy      | 36 (3%)     | 47 (4%)     | 25 (2%)     | 28 (3%)     | 34 (3%)     |
| Other                   | 142 (13%)   | 134 (12%)   | 151 (13%)   | 155 (14%)   | 194 (16%)   |
| Uncertain               | 59 (5%)     | 77 (7%)     | 53 (5%)     | 46 (4%)     | 75 (6%)     |
| Not reported            | 19 (2%)     | 14 (1%)     | 15 (1%)     | 16 (1%)     | 34 (3%)     |
| <b>Total</b>            | <b>1131</b> | <b>1158</b> | <b>1131</b> | <b>1080</b> | <b>1228</b> |

**Table 5.5.2 Incident PD Patients by Primary Disease - New Zealand**

| Primary Kidney Disease  | 2016       | 2017       | 2018       | 2019       | 2020       |
|-------------------------|------------|------------|------------|------------|------------|
| Diabetic Kidney Disease | 146 (43%)  | 165 (48%)  | 162 (46%)  | 154 (45%)  | 163 (43%)  |
| Glomerulonephritis      | 83 (24%)   | 74 (22%)   | 81 (23%)   | 87 (26%)   | 93 (24%)   |
| Hypertension            | 39 (11%)   | 34 (10%)   | 37 (11%)   | 33 (10%)   | 38 (10%)   |
| Polycystic Disease      | 16 (5%)    | 13 (4%)    | 13 (4%)    | 10 (3%)    | 19 (5%)    |
| Reflux Nephropathy      | 10 (3%)    | 4 (1%)     | 7 (2%)     | 8 (2%)     | 11 (3%)    |
| Other                   | 38 (11%)   | 36 (11%)   | 33 (9%)    | 34 (10%)   | 45 (12%)   |
| Uncertain               | 10 (3%)    | 13 (4%)    | 17 (5%)    | 13 (4%)    | 12 (3%)    |
| Not reported            | 0 (0%)     | 3 (1%)     | 2 (1%)     | 0 (0%)     | 2 (1%)     |
| <b>Total</b>            | <b>342</b> | <b>342</b> | <b>352</b> | <b>339</b> | <b>383</b> |

Figure 5.5 shows the proportion of dialysis patients using PD as their modality by age.

**Figure 5.5.1 - PD Patients (%) of all Prevalent Dialysis - Australia 2020**



**Figure 5.5.2 - PD Patients (%) of all Prevalent Dialysis - New Zealand 2020**

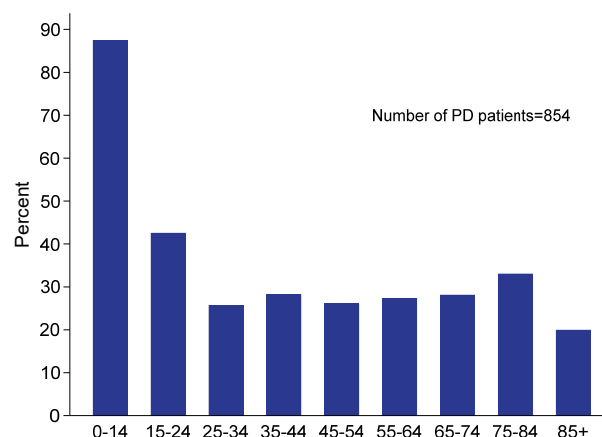


Table 5.6 shows the number of prevalent PD patients, and number per million population, according to PD type.

Population estimates for Australia and New Zealand used for the calculation of prevalence per million population were sourced from the Australian Bureau of Statistics (2020)<sup>1</sup> and Stats NZ (2020)<sup>2</sup>.

**Table 5.6.1 Number (per Million) of Prevalent PD Patients, Australia 2016-2020**

|              | 2016              | 2017             | 2018             | 2019             | 2020             |
|--------------|-------------------|------------------|------------------|------------------|------------------|
| <b>Total</b> | <b>2453 (101)</b> | <b>2424 (99)</b> | <b>2431 (97)</b> | <b>2393 (94)</b> | <b>2544 (99)</b> |
| <b>APD</b>   | 1670 (69)         | 1635 (66)        | 1670 (67)        | 1653 (65)        | 1755 (68)        |
| <b>CAPD</b>  | 783 (32)          | 789 (32)         | 761 (30)         | 740 (29)         | 789 (31)         |

**Table 5.6.2 Number (per Million) of Prevalent PD Patients, New Zealand 2016-2020**

|              | 2016             | 2017             | 2018             | 2019             | 2020             |
|--------------|------------------|------------------|------------------|------------------|------------------|
| <b>Total</b> | <b>831 (176)</b> | <b>864 (179)</b> | <b>867 (177)</b> | <b>824 (165)</b> | <b>854 (168)</b> |
| <b>APD</b>   | 432 (92)         | 453 (94)         | 475 (97)         | 505 (101)        | 501 (98)         |
| <b>CAPD</b>  | 399 (85)         | 411 (85)         | 392 (80)         | 319 (64)         | 353 (69)         |

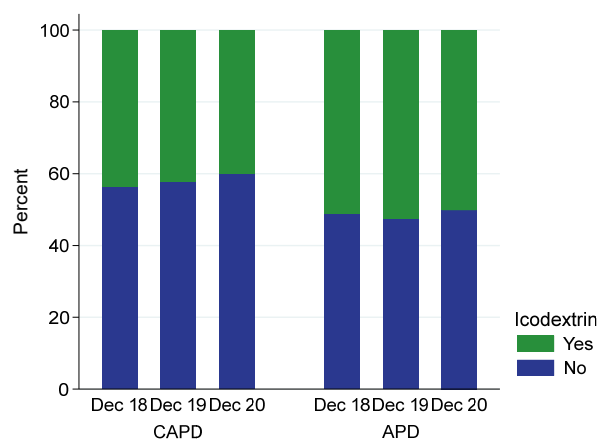
## Peritoneal Dialysis Fluids

Table 5.7 shows the use of Icodextrin by country and PD type at the end of 2020. Figure 5.6 shows the trends in icodextrin use over the last three years. Finally, figure 5.7 shows icodextrin use by state and PD type at the end of 2020.

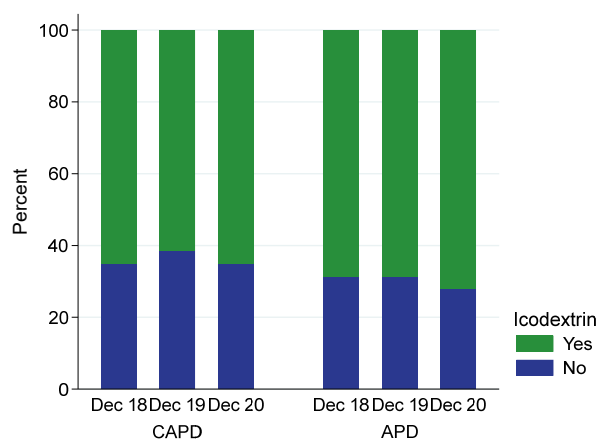
**Table 5.7 Icodextrin Usage by Modality Type - December 2020**

| PD Type      | Australia |      |              |       | New Zealand |     |              |       |     |
|--------------|-----------|------|--------------|-------|-------------|-----|--------------|-------|-----|
|              | No        | Yes  | Not Reported | Total | No          | Yes | Not Reported | Total |     |
| <b>CAPD</b>  | n         | 443  | 294          | 52    | 789         | 112 | 209          | 32    | 353 |
|              | %         | 56%  | 37%          | 7%    |             | 32% | 59%          | 9%    |     |
| <b>APD</b>   | n         | 858  | 863          | 34    | 1755        | 132 | 338          | 31    | 501 |
|              | %         | 49%  | 49%          | 2%    |             | 26% | 67%          | 6%    |     |
| <b>Total</b> | n         | 1301 | 1157         | 86    | 2544        | 244 | 547          | 63    | 854 |
|              | %         | 51%  | 45%          | 3%    |             | 29% | 64%          | 7%    |     |

**Figure 5.6.1 - Icodextrin Use by Modality - Prevalent Patients December 2018 - 2020 Australia**



**Figure 5.6.2 - Icodextrin Use by Modality - Prevalent Patients December 2018 - 2020 New Zealand**



**Figure 5.7 - Icodextrin Use by State and Country - Prevalent Patients December 2020**

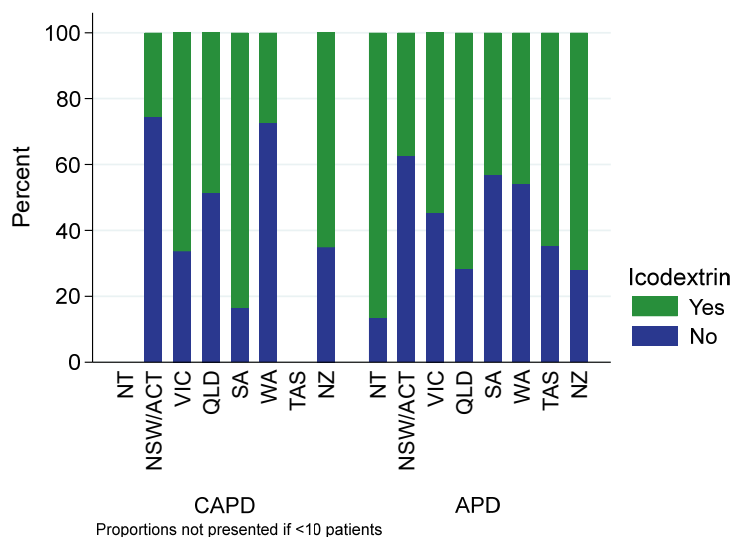


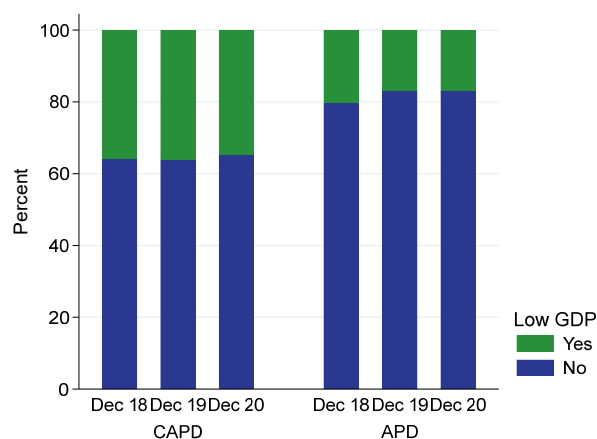
Table 5.8 and figures 5.8 and 5.9 present similar data for low GDP PD solutions.

**Table 5.8 Low GDP Usage by Modality Type - December 2020**

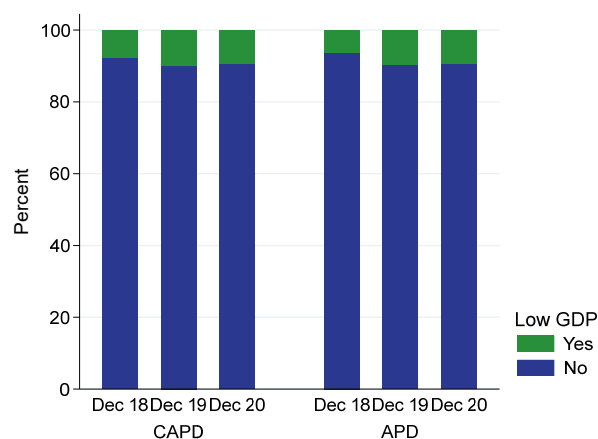
| PD Type |   | Australia |     |              |       | New Zealand |     |              |       |
|---------|---|-----------|-----|--------------|-------|-------------|-----|--------------|-------|
|         |   | No        | Yes | Not Reported | Total | No          | Yes | Not Reported | Total |
| CAPD    | n | 481       | 256 | 52           | 789   | 290         | 30  | 33           | 353   |
|         | % | 61%       | 32% | 7%           |       | 82%         | 8%  | 9%           |       |
| APD     | n | 1432      | 289 | 34           | 1755  | 425         | 44  | 32           | 501   |
|         | % | 82%       | 16% | 2%           |       | 85%         | 9%  | 6%           |       |
| Total   | n | 1913      | 545 | 86           | 2544  | 715         | 74  | 65           | 854   |
|         | % | 75%       | 21% | 3%           |       | 84%         | 9%  | 8%           |       |



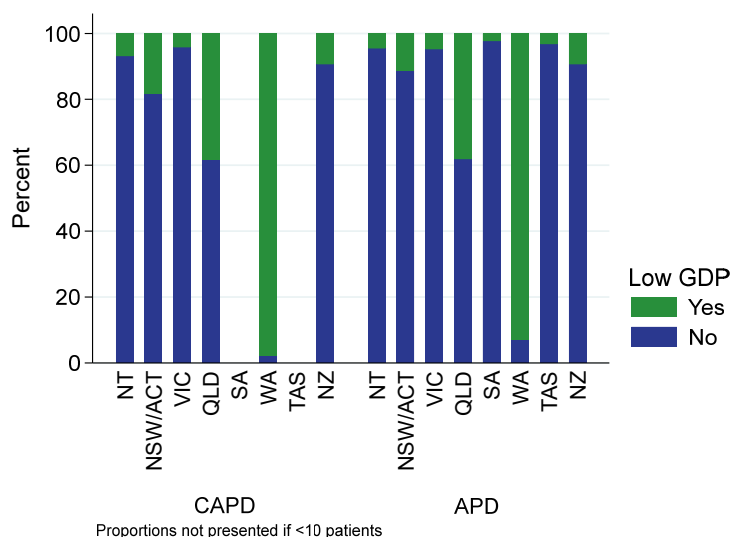
**Figure 5.8.1 - Low GDP Use by Modality - Prevalent Patients December 2018 - 2020 Australia**



**Figure 5.8.2 - Low GDP Use by Modality - Prevalent Patients December 2018 - 2020 New Zealand**



**Figure 5.9 - Low GDP Use by State and Country - Prevalent Patients December 2020**



## Patient Survival

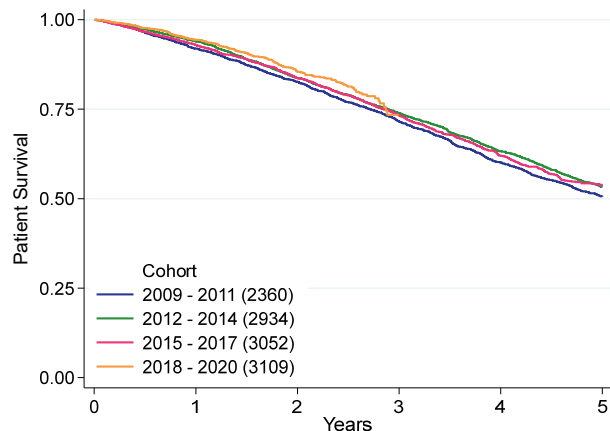
The next section examines PD patient survival. Survival time is presented for those commencing PD for the first time within 365 days of KRT start, from the date of PD start, and censored at transplantation. Patients commencing PD after a transplant are excluded.

Table 5.9 and figure 5.10 show patient survival by era.

**Table 5.9 Patient Survival by Era - Peritoneal Dialysis within 365 days of KRT start - Censored for Transplant 2009 – 2020: % [95% Confidence Interval]**

| Country     | Era         | Number of Patients | Survival  |           |           |           |
|-------------|-------------|--------------------|-----------|-----------|-----------|-----------|
|             |             |                    | 6 months  | 1 year    | 3 years   | 5 years   |
| Australia   | 2009 - 2011 | 2360               | 96[96,97] | 92[91,93] | 72[70,74] | 51[48,53] |
|             | 2012 - 2014 | 2934               | 97[97,98] | 94[93,95] | 74[72,76] | 53[51,55] |
|             | 2015 - 2017 | 3052               | 97[96,97] | 93[92,94] | 73[71,75] | 54[51,56] |
|             | 2018 - 2020 | 3109               | 98[97,98] | 94[93,95] | -         | -         |
| New Zealand | 2009 - 2011 | 768                | 97[96,98] | 92[90,94] | 66[62,69] | 41[37,45] |
|             | 2012 - 2014 | 777                | 97[95,98] | 93[91,94] | 68[65,72] | 46[42,50] |
|             | 2015 - 2017 | 906                | 96[95,97] | 92[90,93] | 65[62,69] | 39[35,44] |
|             | 2018 - 2020 | 956                | 97[96,98] | 93[91,95] | -         | -         |

**Figure 5.10.1 - Patient Survival by Era Peritoneal Dialysis within 365 days of KRT start - 2009 - 2020 Censored for Transplant - Australia**



**Figure 5.10.2 - Patient Survival by Era Peritoneal Dialysis within 365 days of KRT start - 2009 - 2020 Censored for Transplant - New Zealand**

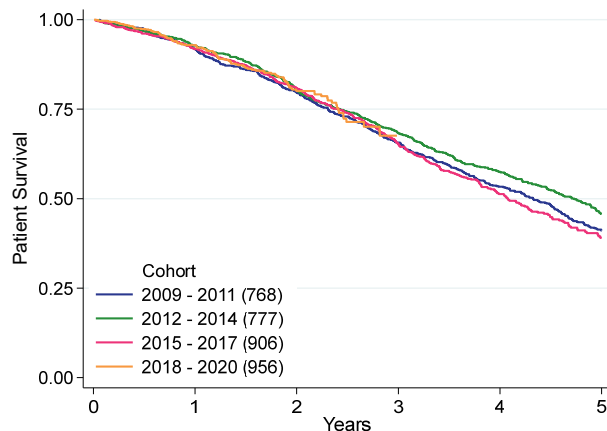
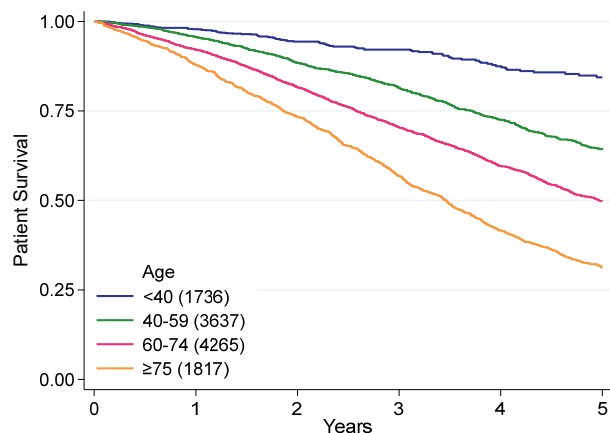


Table 5.10 and figure 5.11 demonstrate the strong association between patient age and survival.

**Table 5.10 Patient Survival by Age Group - Peritoneal Dialysis within 365 days of KRT start - Censored for Transplant 2009 – 2020: % [95% Confidence Interval]**

| Country     | Age Group | Number of Patients | Survival   |           |           |           |
|-------------|-----------|--------------------|------------|-----------|-----------|-----------|
|             |           |                    | 6 months   | 1 year    | 3 year    | 5 year    |
| Australia   | <40       | 1736               | 99[98,99]  | 98[97,98] | 92[90,94] | 84[81,87] |
|             | 40-59     | 3637               | 98[98,99]  | 96[95,96] | 81[80,83] | 64[62,67] |
|             | 60-74     | 4265               | 96[95,97]  | 92[91,93] | 70[69,72] | 50[48,52] |
|             | ≥75       | 1817               | 95[93,96]  | 88[86,89] | 57[54,59] | 31[29,34] |
| New Zealand | <40       | 469                | 99[98,100] | 98[96,99] | 89[84,92] | 74[66,80] |
|             | 40-59     | 1263               | 98[97,99]  | 95[94,96] | 73[70,76] | 51[47,55] |
|             | 60-74     | 1339               | 96[94,97]  | 89[87,91] | 60[57,63] | 34[31,38] |
|             | ≥75       | 336                | 94[90,96]  | 87[83,91] | 48[42,54] | 18[13,23] |

**Figure 5.11.1 - Patient Survival by Age Group Peritoneal Dialysis within 365 days of KRT start - 2009 - 2020 Censored for Transplant - Australia**



**Figure 5.11.2 - Patient Survival by Age Group Peritoneal Dialysis within 365 days of KRT start - 2009 - 2020 Censored for Transplant - New Zealand**

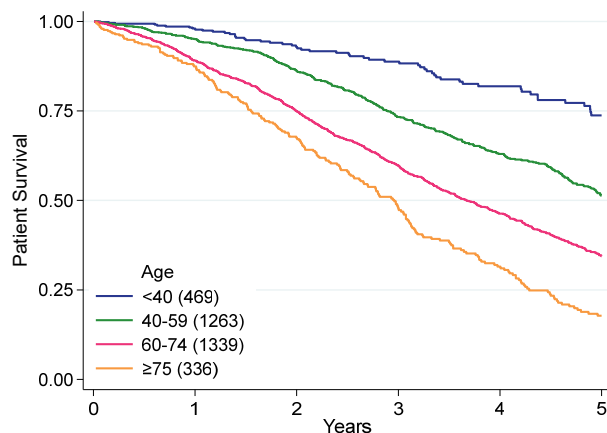
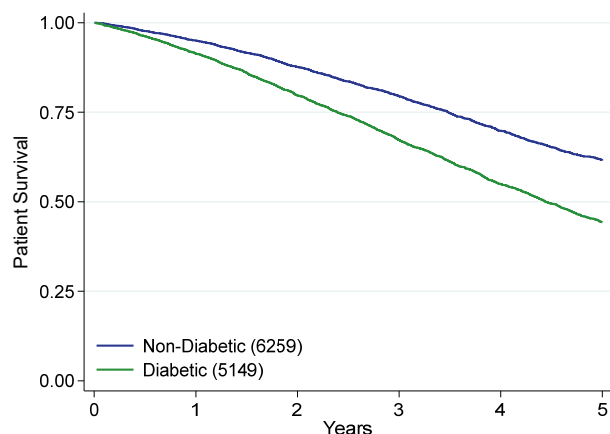


Table 5.11 and figure 5.12 present these data by diabetic status.

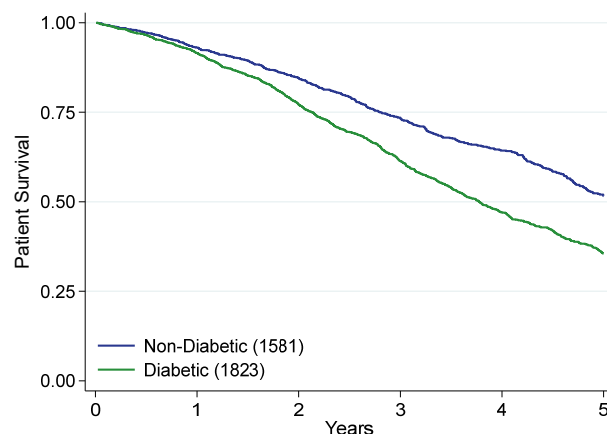
**Table 5.11 Patient Survival by Diabetic Status - Peritoneal Dialysis within 365 days of KRT start - Censored for Transplant 2009 – 2020: % [95% Confidence Interval]**

| Country     | Diabetic Status | Number of Patients | Survival  |           |           |           |
|-------------|-----------------|--------------------|-----------|-----------|-----------|-----------|
|             |                 |                    | 6 months  | 1 year    | 3 year    | 5 year    |
| Australia   | Non-diabetic    | 6259               | 98[97,98] | 95[94,96] | 80[78,81] | 62[60,63] |
|             | Diabetic        | 5149               | 96[96,97] | 91[91,92] | 67[66,69] | 44[42,46] |
| New Zealand | Non-diabetic    | 1581               | 97[96,98] | 93[92,94] | 74[71,76] | 52[48,55] |
|             | Diabetic        | 1823               | 97[96,97] | 92[90,93] | 61[59,64] | 36[33,38] |

**Figure 5.12.1 - Patient Survival by Diabetic Status Peritoneal Dialysis within 365 days of KRT start - 2009 - 2020 Censored for Transplant - Australia**



**Figure 5.12.2 - Patient Survival by Diabetic Status Peritoneal Dialysis within 365 days of KRT start - 2009 - 2020 Censored for Transplant - New Zealand**



## Technique Survival

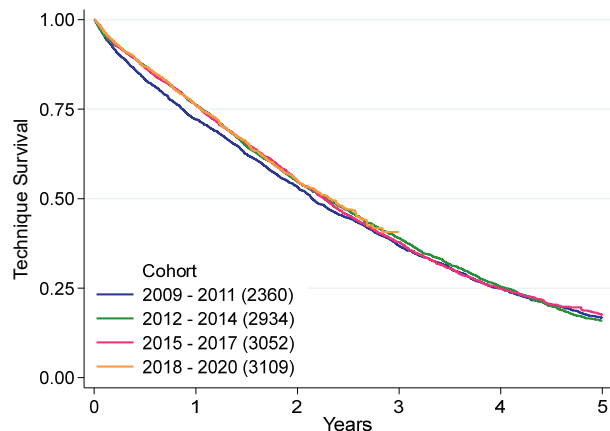
This section examines PD technique survival, defined as the number of days the patient spent on PD before transferring to HD for at least 30 days, withdrawing from dialysis, or dying (either on PD or within 30 days of transfer to HD). Survival time is calculated from the date of PD start and censored at transplantation. Only patients initiating PD for the first time within 365 days of KRT commencement are included. Patients commencing PD after a transplant are excluded. Survival is shown for the same categories reported for patient survival above.

Table 5.12 and figure 5.13 show technique survival by era.

**Table 5.12 Technique Survival by Era - Peritoneal Dialysis within 365 days of KRT start - Censored for Transplant 2009 – 2020: % [95% Confidence Interval]**

| Country     | Era         | Number of Patients | Survival  |           |           |           |
|-------------|-------------|--------------------|-----------|-----------|-----------|-----------|
|             |             |                    | 6 months  | 1 year    | 3 year    | 5 year    |
| Australia   | 2009 - 2011 | 2360               | 83[82,85] | 72[70,74] | 37[35,39] | 17[15,18] |
|             | 2012 - 2014 | 2934               | 87[86,88] | 76[75,78] | 39[37,41] | 16[14,18] |
|             | 2015 - 2017 | 3052               | 87[85,88] | 76[75,78] | 38[36,40] | 17[15,20] |
|             | 2018 - 2020 | 3109               | 87[86,88] | 76[74,78] | -         | -         |
| New Zealand | 2009 - 2011 | 768                | 91[88,92] | 81[78,83] | 43[39,46] | 17[14,20] |
|             | 2012 - 2014 | 777                | 87[84,89] | 78[75,81] | 41[37,44] | 19[16,22] |
|             | 2015 - 2017 | 906                | 87[85,89] | 78[75,80] | 38[34,41] | 12[9,16]  |
|             | 2018 - 2020 | 956                | 87[84,89] | 76[73,79] | -         | -         |

**Figure 5.13.1 - Technique Survival by Era Peritoneal Dialysis within 365 days of KRT start - 2009 - 2020 Censored for Transplant - Australia**



**Figure 5.13.2 - Technique Survival by Era Peritoneal Dialysis within 365 days of KRT start - 2009 - 2020 Censored for Transplant - New Zealand**

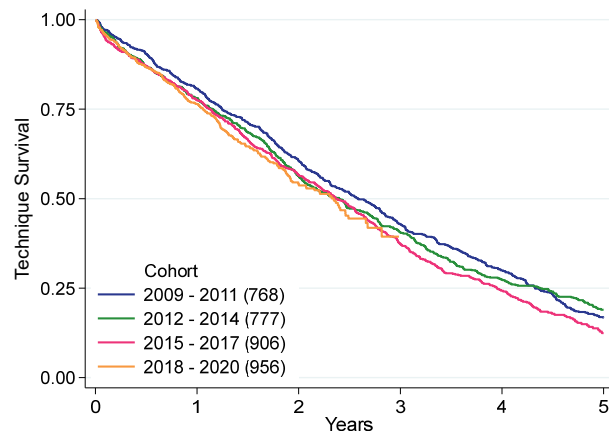
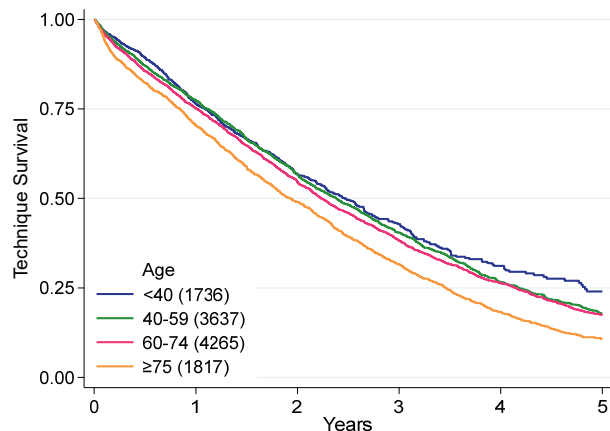


Table 5.13 and figure 5.14 show the association between patient age and technique survival.

**Table 5.13 Technique Survival by Age Group - Peritoneal Dialysis within 365 days of KRT start - Censored for Transplant 2009 – 2020: % [95% Confidence Interval]**

| Country     | Age Group | Number of Patients | Survival  |           |           |           |
|-------------|-----------|--------------------|-----------|-----------|-----------|-----------|
|             |           |                    | 6 months  | 1 year    | 3 year    | 5 year    |
| Australia   | <40       | 1736               | 89[88,91] | 76[74,79] | 43[39,46] | 24[20,29] |
|             | 40-59     | 3637               | 87[86,88] | 77[76,79] | 40[38,43] | 18[16,20] |
|             | 60-74     | 4265               | 86[84,87] | 75[74,76] | 38[36,40] | 17[16,19] |
|             | ≥75       | 1817               | 82[80,84] | 70[68,72] | 32[29,34] | 11[9,13]  |
| New Zealand | <40       | 469                | 90[87,92] | 80[75,83] | 45[39,51] | 25[18,32] |
|             | 40-59     | 1263               | 89[87,91] | 81[78,83] | 42[39,46] | 17[14,20] |
|             | 60-74     | 1339               | 87[85,89] | 77[74,79] | 38[35,41] | 16[13,18] |
|             | ≥75       | 336                | 83[79,87] | 74[68,78] | 32[27,38] | 9[5,13]   |

**Figure 5.14.1 - Technique Survival by Age Group Peritoneal Dialysis within 365 days of KRT start - 2009 - 2020 Censored for Transplant - Australia**



**Figure 5.14.2 - Technique Survival by Age Group Peritoneal Dialysis within 365 days of KRT start - 2009 - 2020 Censored for Transplant - New Zealand**

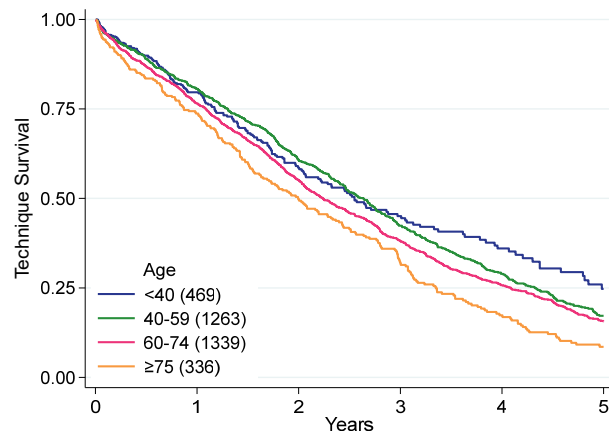
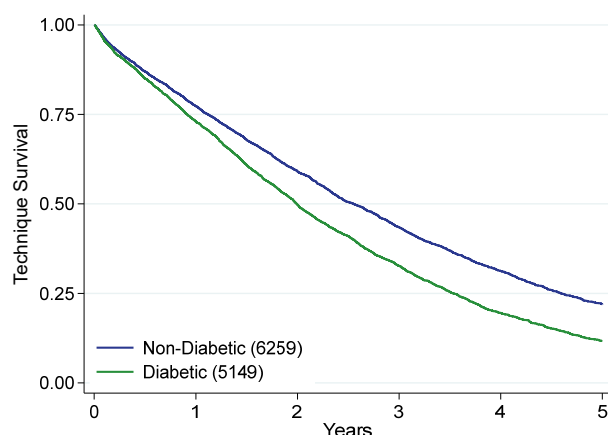


Table 5.14 and figure 5.15 present these data by diabetic status.

**Table 5.14 Technique Survival by Diabetic Status - Peritoneal Dialysis within 365 days of KRT start - Censored for Transplant 2009 - 2020: % [95% Confidence Interval]**

| Country     | Diabetic Status | Number of Patients | Survival  |           |           |           |
|-------------|-----------------|--------------------|-----------|-----------|-----------|-----------|
|             |                 |                    | 6 months  | 1 year    | 3 year    | 5 year    |
| Australia   | Non-diabetic    | 6259               | 87[86,88] | 77[76,78] | 43[42,45] | 22[20,24] |
|             | Diabetic        | 5149               | 85[84,86] | 73[72,74] | 33[31,34] | 12[10,13] |
| New Zealand | Non-diabetic    | 1581               | 89[87,90] | 80[77,82] | 48[45,51] | 23[20,26] |
|             | Diabetic        | 1823               | 87[85,89] | 77[75,79] | 34[32,37] | 12[10,14] |

**Figure 5.15.1 - Technique Survival by Diabetic Status Peritoneal Dialysis within 365 days of KRT start - 2009 - 2020 Censored for Transplant – Australia**



**Figure 5.15.2 - Technique Survival by Diabetic Status Peritoneal Dialysis within 365 days of KRT start - 2009 - 2020 Censored for Transplant - New Zealand**

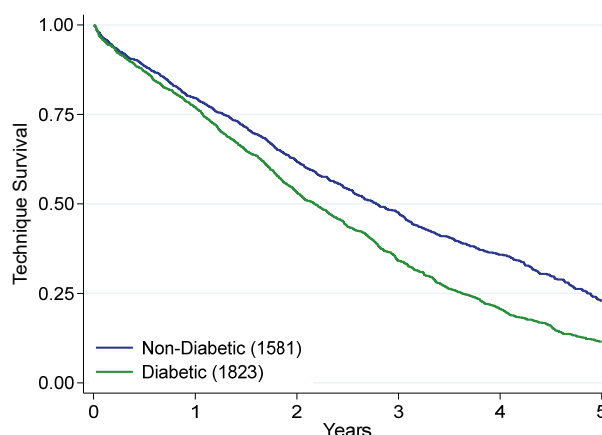
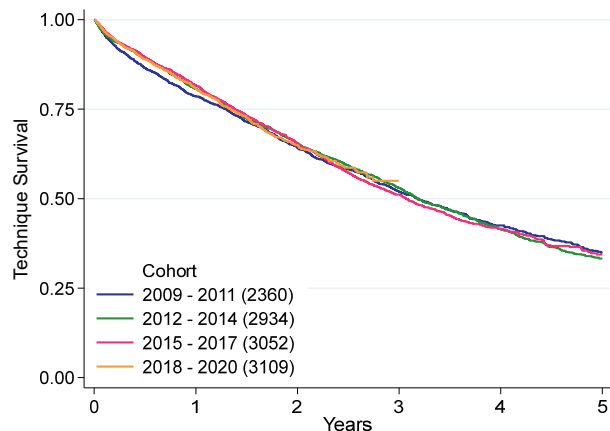


Table 5.15 and figure 5.16 show death-censored technique survival by era. Survival time is also censored for withdrawal from dialysis and transplantation.

**Table 5.15 Technique Survival by Era - Peritoneal Dialysis within 365 days of KRT start - Censored for Death, Withdrawal and Transplant 2009 – 2020: % [95% Confidence Interval]**

| Country     | Era         | Number of Patients | Survival  |           |           |           |
|-------------|-------------|--------------------|-----------|-----------|-----------|-----------|
|             |             |                    | 6 months  | 1 year    | 3 year    | 5 year    |
| Australia   | 2009 - 2011 | 2360               | 86[85,88] | 79[77,80] | 52[49,54] | 35[32,38] |
|             | 2012 - 2014 | 2934               | 89[88,90] | 81[79,82] | 53[51,55] | 33[31,36] |
|             | 2015 - 2017 | 3052               | 89[88,91] | 82[80,83] | 51[49,53] | 34[31,38] |
|             | 2018 - 2020 | 3109               | 89[88,90] | 81[79,82] | -         | -         |
| New Zealand | 2009 - 2011 | 768                | 93[91,95] | 88[85,90] | 67[63,70] | 44[39,49] |
|             | 2012 - 2014 | 777                | 90[88,92] | 84[81,86] | 60[56,64] | 44[39,49] |
|             | 2015 - 2017 | 906                | 90[88,92] | 84[81,86] | 58[54,61] | 38[31,44] |
|             | 2018 - 2020 | 956                | 89[87,91] | 83[80,86] | -         | -         |

**Figure 5.16.1 - Technique Survival by Era Peritoneal Dialysis within 365 days of KRT start - 2009 - 2020 Censored for Death, Withdrawal and Transplant - Australia**



**Figure 5.16.2 - Technique Survival by Era Peritoneal Dialysis within 365 days of KRT start - 2009 - 2020 Censored for Death, Withdrawal and Transplant - New Zealand**

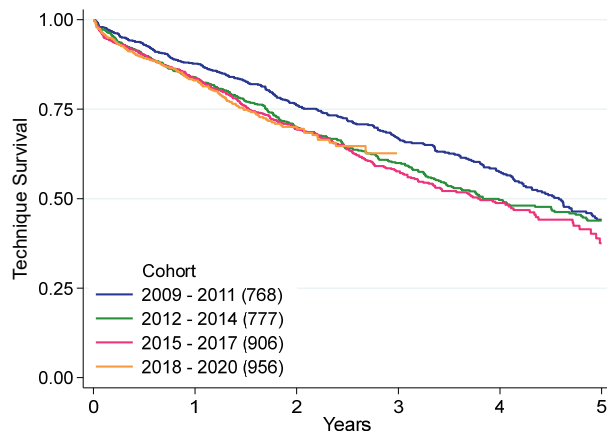
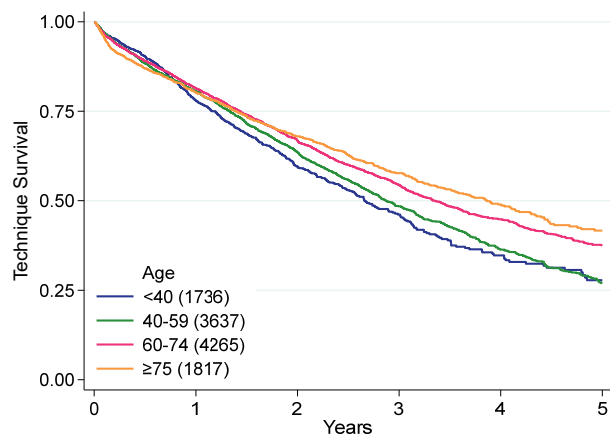


Table 5.16 and figure 5.17 show the association between patient age and death-censored technique survival.

**Table 5.16 Technique Survival by Age Group - Peritoneal Dialysis within 365 days of KRT start - Censored for Death, Withdrawal and Transplant 2009 - 2020: % [95% Confidence Interval]**

| Country     | Age Group | Number of Patients | Survival  |           |           |           |
|-------------|-----------|--------------------|-----------|-----------|-----------|-----------|
|             |           |                    | 6 months  | 1 year    | 3 year    | 5 year    |
| Australia   | <40       | 1736               | 90[89,92] | 78[76,80] | 46[42,50] | 28[23,33] |
|             | 40-59     | 3637               | 88[87,89] | 81[79,82] | 48[46,51] | 27[24,30] |
|             | 60-74     | 4265               | 89[88,90] | 81[80,83] | 54[52,56] | 38[35,40] |
|             | ≥75       | 1817               | 87[85,88] | 80[78,82] | 58[55,61] | 42[38,46] |
| New Zealand | <40       | 469                | 90[87,93] | 81[76,84] | 51[44,57] | 33[25,42] |
|             | 40-59     | 1263               | 91[89,92] | 84[82,86] | 59[55,62] | 35[31,40] |
|             | 60-74     | 1339               | 91[89,92] | 86[84,88] | 64[60,67] | 48[43,52] |
|             | ≥75       | 336                | 89[85,92] | 85[81,89] | 70[63,75] | 61[52,68] |

**Figure 5.17.1 - Technique Survival by Age Group Peritoneal Dialysis within 365 days of KRT start - 2009 - 2020 Censored for Death, Withdrawal and Transplant - Australia**



**Figure 5.17.2 - Technique Survival by Age Group Peritoneal Dialysis within 365 days of KRT start - 2009 - 2020 Censored for Death, Withdrawal and Transplant - New Zealand**

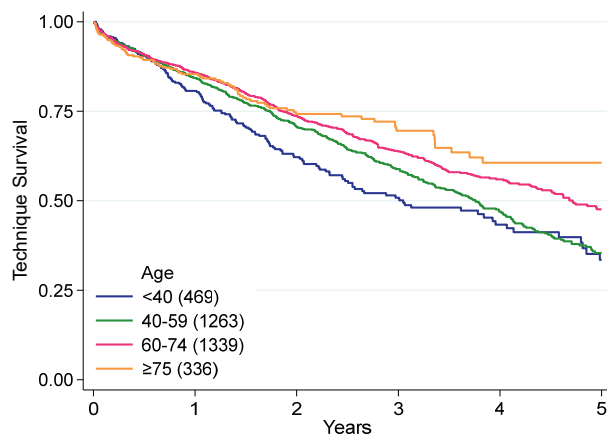
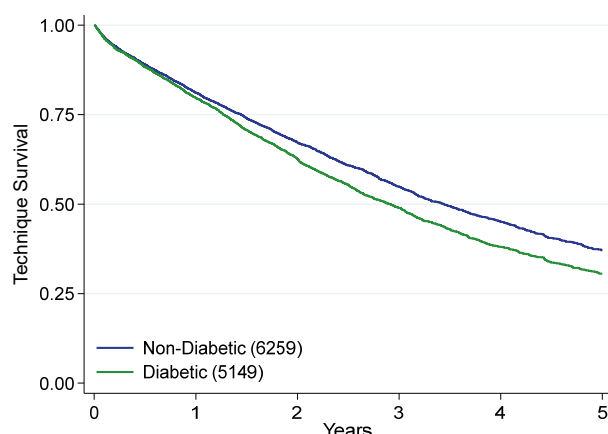


Table 5.17 and figure 5.18 present these data by diabetic status.

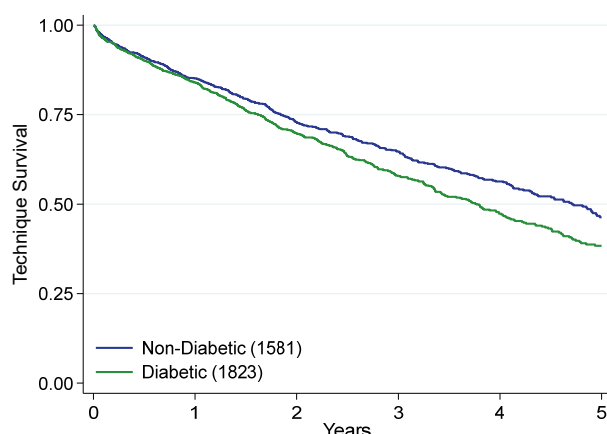
**Table 5.17 Technique Survival by Diabetic Status - Peritoneal Dialysis within 365 days of KRT start - Censored for Death, Withdrawal and Transplant 2009 - 2020: % [95% Confidence Interval]**

| Country     | Diabetic Status | Number of Patients | Survival  |           |           |           |
|-------------|-----------------|--------------------|-----------|-----------|-----------|-----------|
|             |                 |                    | 6 months  | 1 year    | 3 year    | 5 year    |
| Australia   | Non-diabetic    | 6259               | 89[88,90] | 81[80,82] | 55[53,57] | 37[35,39] |
|             | Diabetic        | 5149               | 88[87,89] | 80[78,81] | 49[47,51] | 31[28,33] |
| New Zealand | Non-diabetic    | 1581               | 91[89,92] | 85[83,87] | 65[62,68] | 46[42,51] |
|             | Diabetic        | 1823               | 90[89,91] | 84[82,86] | 58[55,61] | 38[34,42] |

**Figure 5.18.1 - Technique Survival by Diabetic Status**  
**Peritoneal Dialysis within 365 days of KRT start - 2009 - 2020**  
**Censored for Death, Withdrawal and Transplant - Australia**



**Figure 5.18.2 - Technique Survival by Diabetic Status**  
**Peritoneal Dialysis within 365 days of KRT start - 2009 - 2020**  
**Censored for Death, Withdrawal and Transplant - New Zealand**



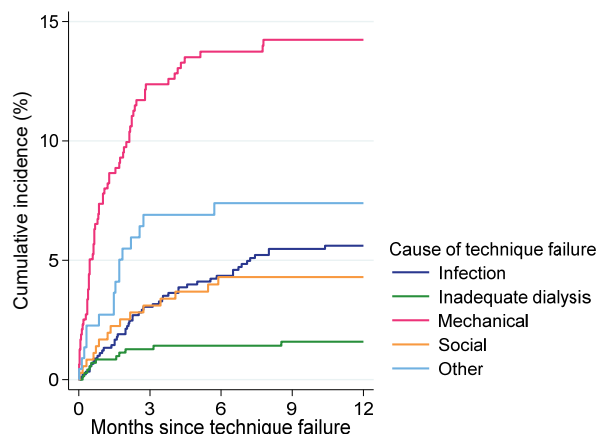
The causes of PD technique failure in 2020 are shown in table 5.18.

**Table 5.18 Reason for Technique Failure 2020**

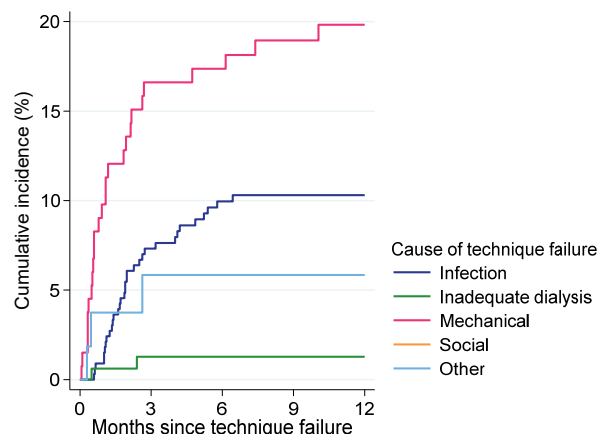
| Category                   | Cause of Technique Failure            | Australia        | New Zealand      |
|----------------------------|---------------------------------------|------------------|------------------|
| <b>Infection</b>           | Recurrent/Persistent Peritonitis      | 66               | 34               |
|                            | Acute Peritonitis                     | 85               | 18               |
|                            | Tunnel/Exit Site Infection            | 23               | 13               |
|                            | Diverticulitis                        | 1                | 1                |
|                            | Abdominal Abscess                     | 0                | 2                |
|                            | <b>Total</b>                          |                  | <b>175 (21%)</b> |
| <b>Inadequate dialysis</b> | Inadequate Solute Clearance           | 100              | 17               |
|                            | Inadequate Fluid Ultrafiltration      | 31               | 16               |
|                            | Excessive Fluid Ultrafiltration       | 1                | 0                |
|                            | Poor Nutrition                        | 1                | 2                |
|                            | <b>Total</b>                          |                  | <b>133 (16%)</b> |
| <b>Mechanical</b>          | Dialysate Leak                        | 21               | 5                |
|                            | Catheter Block                        | 15               | 0                |
|                            | Haemoperitoneum                       | 1                | 0                |
|                            | Catheter Fell Out                     | 1                | 0                |
|                            | Hernia                                | 18               | 9                |
|                            | Abdominal Pain                        | 5                | 0                |
|                            | Abdominal Surgery                     | 16               | 0                |
|                            | Multiple Adhesions                    | 1                | 0                |
|                            | Pleural Effusion                      | 5                | 0                |
|                            | Other Surgery                         | 12               | 1                |
|                            | Hydrothorax                           | 3                | 1                |
|                            | Scrotal Oedema                        | 5                | 0                |
|                            | <b>Total</b>                          |                  | <b>103 (12%)</b> |
| <b>Social</b>              | Patient Preference                    | 28               | 6                |
|                            | Unable to Manage Self-Care            | 41               | 10               |
|                            | <b>Total</b>                          |                  | <b>69 (8%)</b>   |
| <b>Other</b>               | Cardiovascular                        | 4                | 0                |
|                            | Vascular Access                       | 1                | 0                |
|                            | Planned Transfer After Acute HD Start | 1                | 0                |
|                            | Other (Specify)                       | 38               | 19               |
|                            | <b>Total</b>                          |                  | <b>44 (5%)</b>   |
| <b>Death</b>               | <b>Total</b>                          | <b>217 (26%)</b> | <b>106 (34%)</b> |
| <b>Withdrawal</b>          | <b>Total</b>                          | <b>59 (7%)</b>   | <b>34 (11%)</b>  |
| <b>Not reported</b>        | <b>Total</b>                          | <b>28 (3%)</b>   | <b>17 (5%)</b>   |

Figure 5.19 and table 5.19 show the cumulative incidence of patients returning to PD after a technique failure over 2016-2020. These data are censored at transplantation, and death is treated as a competing risk.

**Figure 5.19.1 - Time to Restarting PD after Technique Failure - Australia 2016-2020**



**Figure 5.19.2 - Time to Restarting PD after Technique Failure - New Zealand 2016-2020**



**Table 5.19.1 Return to PD (Cumulative Incidence and 95% CI) by Cause of Technique Failure, Australia 2016-2020**

| Cause of technique failure | 3 months         | 6 months          | 9 months          | 12 months         |
|----------------------------|------------------|-------------------|-------------------|-------------------|
| Infection                  | 3.0 (2.1, 4.3)   | 4.3 (3.1, 5.8)    | 5.5 (4.1, 7.1)    | 5.6 (4.2, 7.3)    |
| Inadequate dialysis        | 1.3 (0.6, 2.3)   | 1.4 (0.7, 2.5)    | 1.6 (0.8, 2.7)    | 1.6 (0.8, 2.7)    |
| Mechanical                 | 12.4 (9.6, 15.5) | 13.7 (10.8, 17.0) | 14.2 (11.2, 17.6) | 14.2 (11.2, 17.6) |
| Social                     | 3.1 (1.6, 5.3)   | 4.3 (2.5, 6.8)    | 4.3 (2.5, 6.8)    | 4.3 (2.5, 6.8)    |
| Other                      | 6.9 (4.0, 10.8)  | 7.4 (4.4, 11.4)   | 7.4 (4.4, 11.4)   | 7.4 (4.4, 11.4)   |

**Table 5.19.2 Return to PD (Cumulative Incidence and 95% CI) by Cause of Technique Failure, New Zealand 2016-2020**

| Cause of technique failure | 3 months          | 6 months          | 9 months          | 12 months         |
|----------------------------|-------------------|-------------------|-------------------|-------------------|
| Infection                  | 7.3 (4.8, 10.5)   | 10.0 (7.0, 13.5)  | 10.3 (7.3, 13.9)  | 10.3 (7.3, 13.9)  |
| Inadequate dialysis        | 1.3 (0.3, 4.2)    | 1.3 (0.3, 4.2)    | 1.3 (0.3, 4.2)    | 1.3 (0.3, 4.2)    |
| Mechanical                 | 16.6 (10.9, 23.4) | 17.4 (11.5, 24.3) | 18.9 (12.8, 26.0) | 19.8 (13.5, 27.0) |
| Social                     | . (. .)           | . (. .)           | . (. .)           | . (. .)           |
| Other                      | 5.8 (1.5, 14.6)   | 5.8 (1.5, 14.6)   | 5.8 (1.5, 14.6)   | 5.8 (1.5, 14.6)   |

## Peritonitis

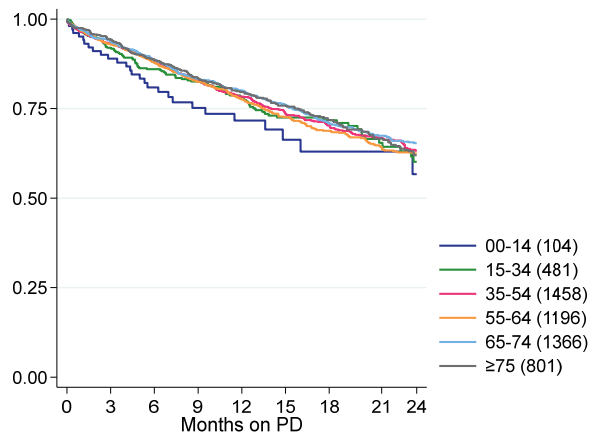
Table 5.20 and figure 5.20 present the time to first peritonitis over 2016-2020 by age at PD start.

**Table 5.20 First PD Treatment to First Episode of Peritonitis by Age at Entry 01-Jan-2016 to 31-Dec-2020 % Survival [95% Confidence Interval]**

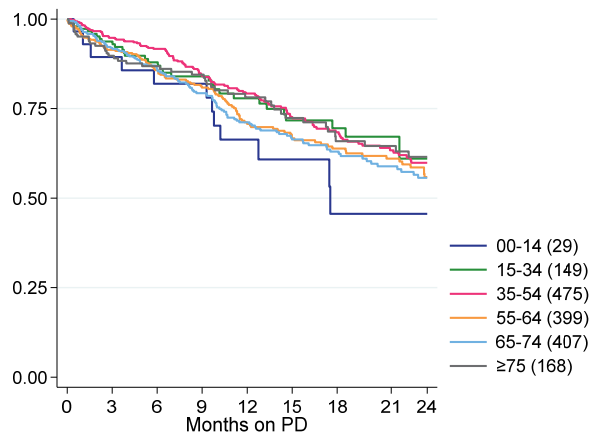
| Survival           | Age Groups       |                  |                   |                   |                   |                | All               |
|--------------------|------------------|------------------|-------------------|-------------------|-------------------|----------------|-------------------|
|                    | 00-14<br>(n=104) | 15-34<br>(n=481) | 35-54<br>(n=1458) | 55-64<br>(n=1196) | 65-74<br>(n=1366) | ≥75<br>(n=801) |                   |
| <b>Australia</b>   |                  |                  |                   |                   |                   |                |                   |
| 3 months           | 89 [81,94]       | 92 [89,94]       | 93 [92,94]        | 93 [91,94]        | 94 [92,95]        | 94 [92,96]     | <b>93 [92,94]</b> |
| 6 months           | 81 [71,88]       | 86 [82,89]       | 89 [87,90]        | 88 [86,90]        | 89 [87,90]        | 89 [86,91]     | <b>88 [87,89]</b> |
| 9 months           | 75 [65,83]       | 83 [78,86]       | 83 [81,85]        | 83 [80,85]        | 83 [81,85]        | 84 [80,86]     | <b>83 [82,84]</b> |
| 1 year             | 72 [60,80]       | 78 [73,82]       | 78 [76,81]        | 78 [75,80]        | 80 [78,82]        | 80 [76,83]     | <b>79 [77,80]</b> |
| 2 years            | 57 [39,71]       | 60 [52,67]       | 63 [59,67]        | 63 [59,66]        | 65 [62,69]        | 62 [57,66]     | <b>63 [61,65]</b> |
| 3 years            | 57 [39,71]       | 54 [44,63]       | 54 [49,59]        | 48 [43,53]        | 53 [48,57]        | 53 [47,58]     | <b>52 [50,54]</b> |
| <b>New Zealand</b> |                  |                  |                   |                   |                   |                |                   |
| 3 months           | 89 [71,96]       | 94 [88,97]       | 95 [92,96]        | 91 [88,94]        | 92 [89,94]        | 90 [84,94]     | <b>93 [91,94]</b> |
| 6 months           | 82 [62,92]       | 88 [81,92]       | 92 [89,94]        | 86 [82,89]        | 86 [82,89]        | 87 [80,91]     | <b>88 [86,89]</b> |
| 9 months           | 82 [62,92]       | 84 [76,89]       | 84 [80,87]        | 81 [76,85]        | 79 [74,83]        | 84 [77,89]     | <b>82 [80,84]</b> |
| 1 year             | 66 [45,81]       | 78 [69,85]       | 79 [74,83]        | 71 [65,76]        | 71 [66,76]        | 78 [70,84]     | <b>75 [72,77]</b> |
| 2 years            | 46 [22,66]       | 61 [47,72]       | 60 [53,66]        | 56 [49,63]        | 56 [49,62]        | 62 [51,70]     | <b>58 [54,61]</b> |
| 3 years            | 27 [8,52]        | 56 [41,69]       | 50 [42,58]        | 50 [42,57]        | 46 [38,55]        | 45 [33,57]     | <b>48 [44,52]</b> |



**Figure 5.20.1 - First PD Treatment to First Peritonitis - By Age at First PD Australia 2016 - 2020**

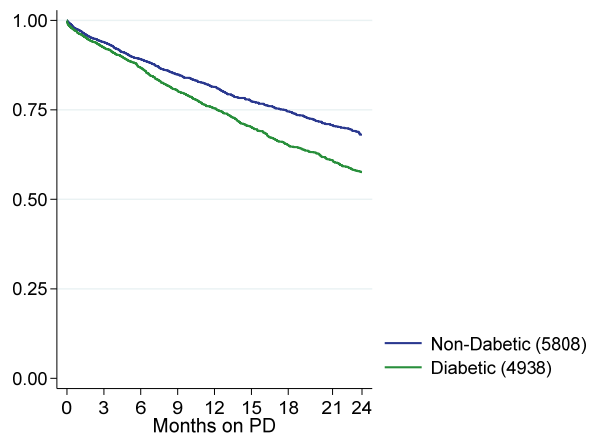


**Figure 5.20.2 - First PD Treatment to First Peritonitis - By Age at First PD New Zealand 2016 - 2020**

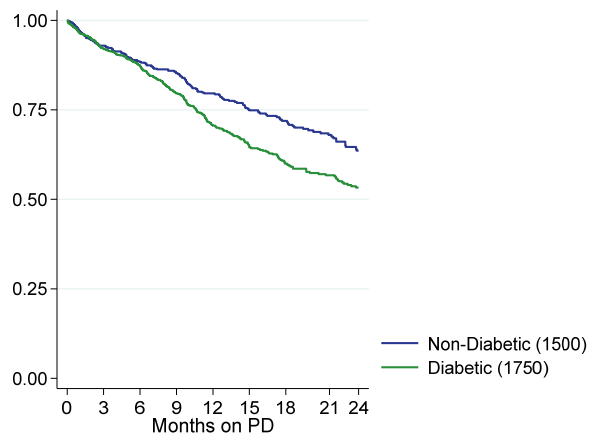


Diabetes is associated with a shorter time to first peritonitis in both countries, but this difference only appears several months into PD treatment (figure 5.21).

**Figure 5.21.1 - First PD Treatment to First Peritonitis - By Diabetic Status at KRT entry Australia 2016 - 2020**



**Figure 5.21.2 - First PD Treatment to First Peritonitis - By Diabetic Status at KRT entry New Zealand 2016 - 2020**



## Australian Peritonitis Registry

Since October 2003 ANZDATA has collected detailed information on PD peritonitis episodes in Australian patients. A selection of those data is reported here. New Zealand has a separate PD registry which is not currently linked with ANZDATA.

Table 5.21 and Figures 5.22-5.26 report the peritonitis rate, expressed as episodes per patient-year in the table and on the left y axis of the figures and patient-months per episode on the right y axis of the figures, according to different categories.

**Table 5.21 PD Peritonitis Episodes Per Year by State/Territory, Australia 2016-2020**

| State            | 2016        | 2017        | 2018        | 2019        | 2020        | 2016-2020   |
|------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| QLD              | 0.39        | 0.43        | 0.41        | 0.38        | 0.33        | <b>0.39</b> |
| NSW              | 0.31        | 0.31        | 0.31        | 0.22        | 0.28        | <b>0.29</b> |
| ACT              | 0.42        | 0.38        | 0.41        | 0.60        | 0.41        | <b>0.45</b> |
| VIC              | 0.31        | 0.24        | 0.26        | 0.18        | 0.18        | <b>0.24</b> |
| TAS              | 0.29        | 0.12        | 0.20        | 0.08        | 0.11        | <b>0.17</b> |
| SA               | 0.27        | 0.29        | 0.15        | 0.22        | 0.20        | <b>0.22</b> |
| NT               | 0.58        | 0.59        | 0.60        | 0.32        | 0.49        | <b>0.49</b> |
| WA               | 0.38        | 0.32        | 0.39        | 0.50        | 0.39        | <b>0.40</b> |
| <b>Australia</b> | <b>0.33</b> | <b>0.32</b> | <b>0.32</b> | <b>0.27</b> | <b>0.28</b> | <b>0.30</b> |

Figure 5.22 - PD Peritonitis Rate - Australia 2004-2020

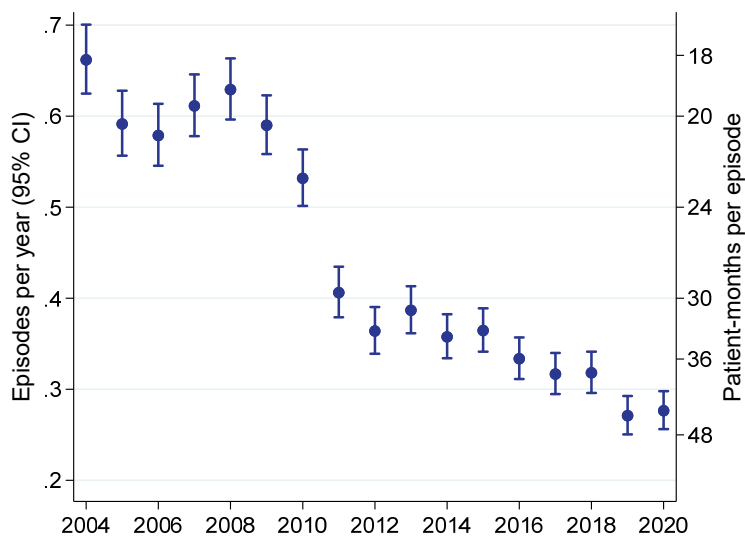


Figure 5.23 - PD Peritonitis Rate - By State/Territory, Australia 2016-2020

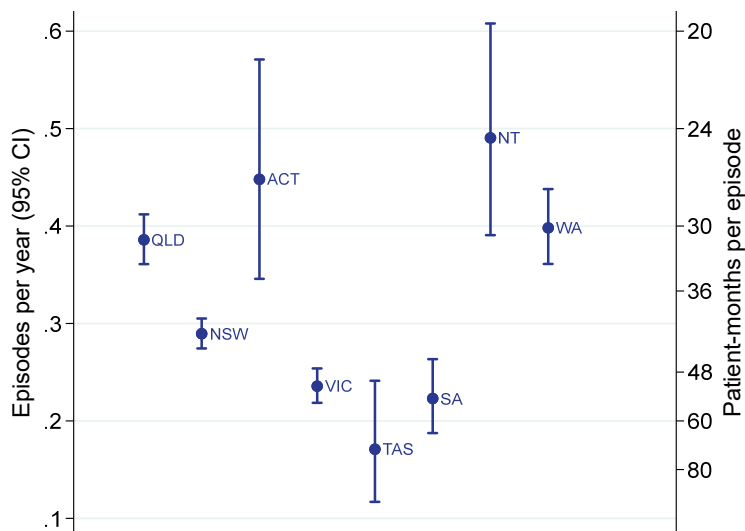
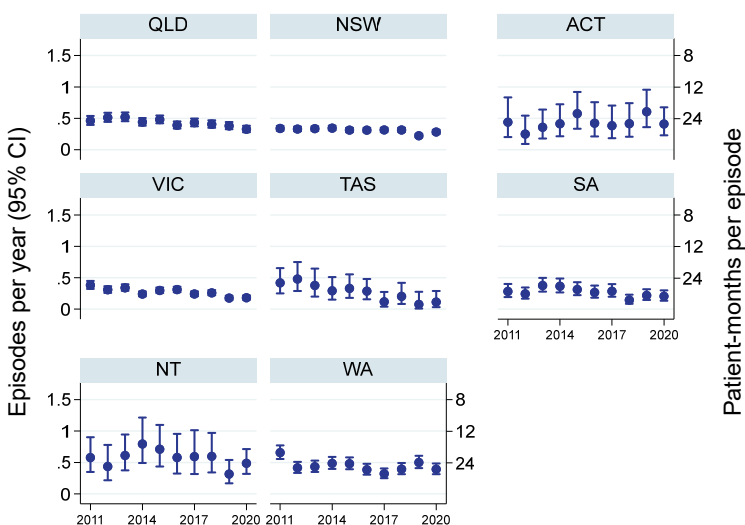
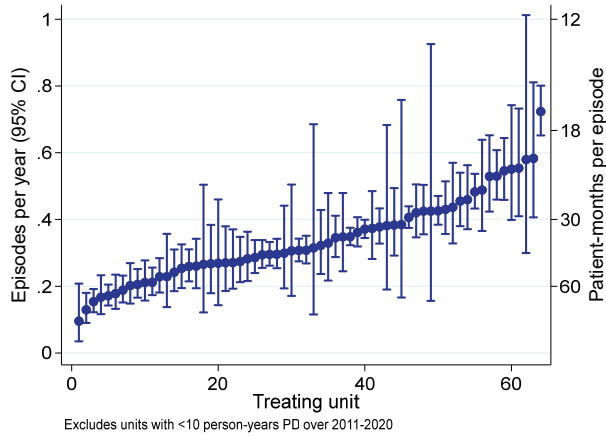


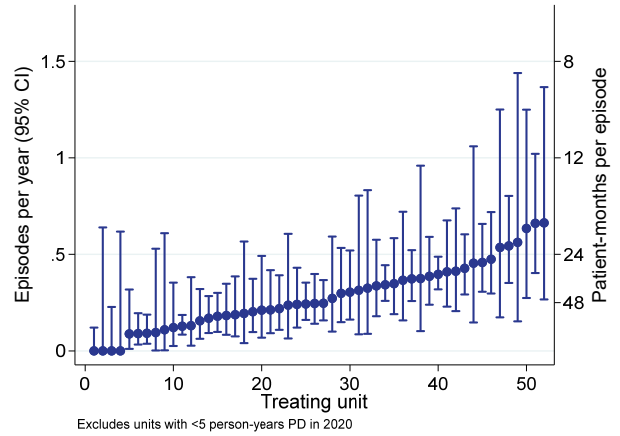
Figure 5.24 - PD Peritonitis Rate - By State/Territory, Australia 2011-2020



**Figure 5.25 - PD Peritonitis Rate - By Treating Unit, Australia 2011-2020**

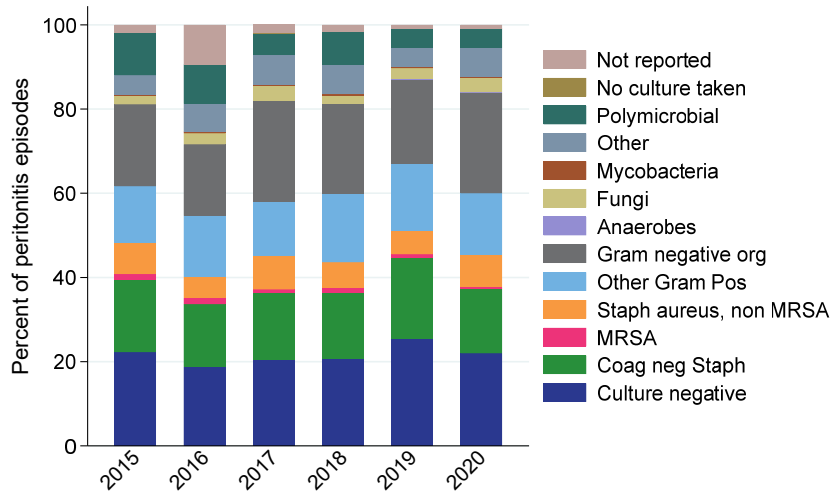


**Figure 5.26 - PD Peritonitis Rate - By Treating Unit, Australia 2020**

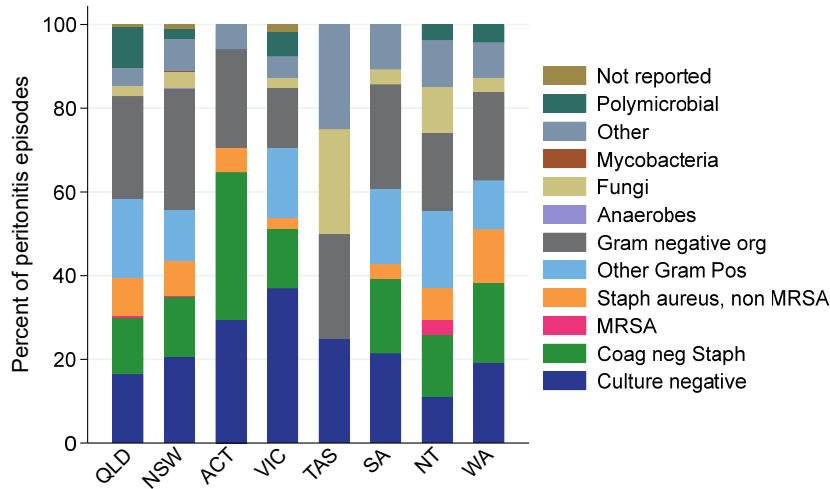


The organisms causing peritonitis are presented in figure 5.27. Figure 5.28 shows these data for 2020 stratified by state/territory.

**Figure 5.27 - Distribution of Organisms Causing Peritonitis - Australia 2015-2020**



**Figure 5.28 - Distribution of Organisms Causing Peritonitis - Australia 2020**



Initial treatments for peritonitis episodes are shown in (figure 5.29). The medications used in the final regimen are shown in figure 5.30.

Figure 5.29 - Initial Antibiotic Regimen - Australia 2015-2020

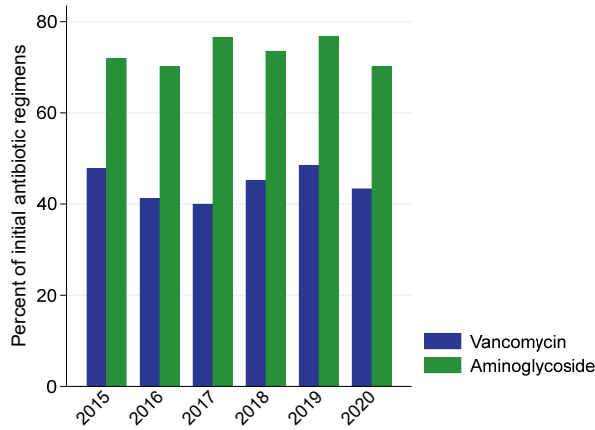
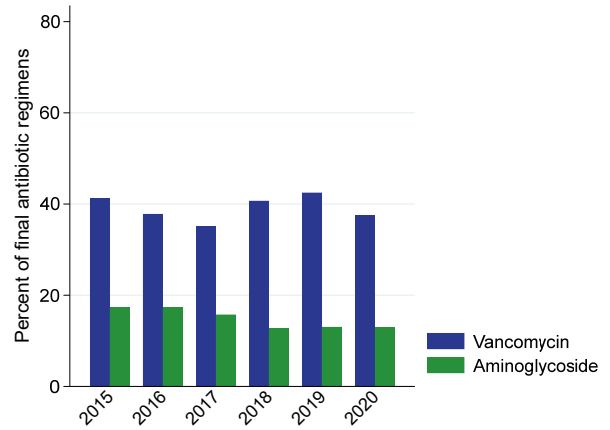
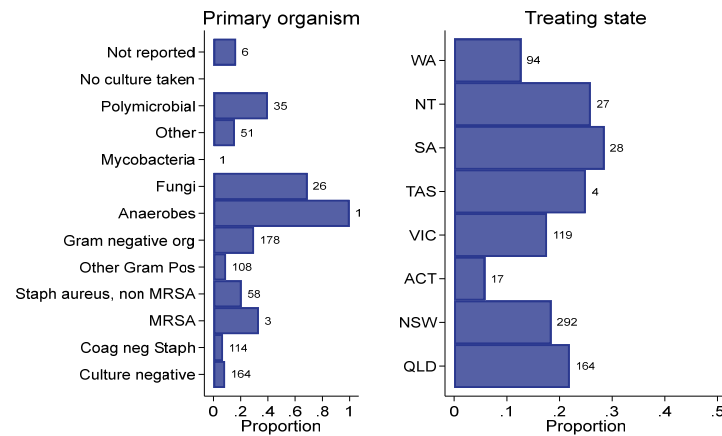


Figure 5.30 - Final Antibiotic Regimen - Australia 2015-2020



The proportion of peritonitis episodes resulting in a permanent transfer to haemodialysis by organism and state/territory is shown in (figure 5.31).

Figure 5.31 - Proportion of Episodes Resulting in Permanent HD Transfer - Australia 2020



Values are total number of peritonitis episodes reported in 2020

## Laboratory Values

### Anaemia

Figure 5.32 shows the distribution of Hb in PD patients over the last 3 years.

Figure 5.32 - Haemoglobin - Peritoneal Dialysis - December 2018-2020

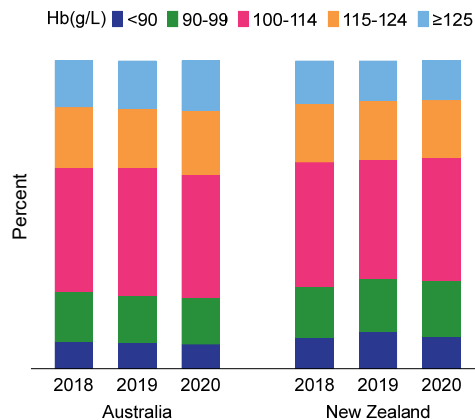
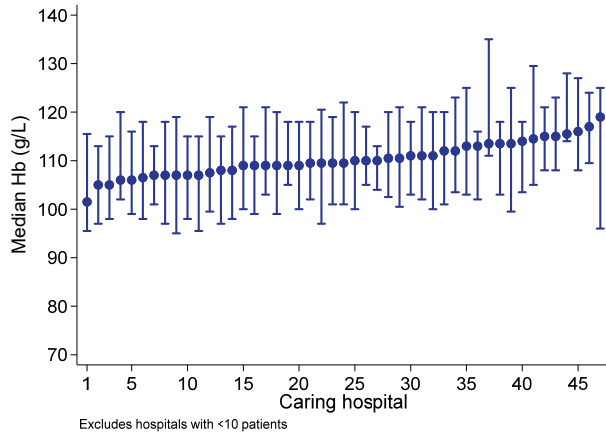


Figure 5.33 shows the variation in Hb between treating hospitals; median Hb ranged from 102 to 119g/L in Australia and 101-115g/L in New Zealand.

**Figure 5.33.1 - Haemoglobin in Peritoneal Dialysis Patients - Australia 31 December 2020**



**Figure 5.33.2 - Haemoglobin in Peritoneal Dialysis Patients - New Zealand 31 December 2020**

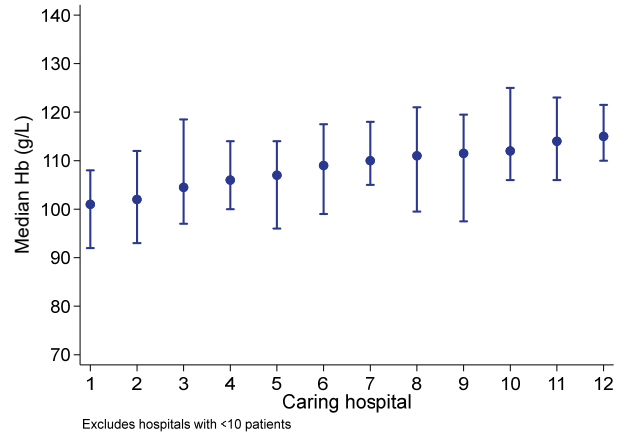
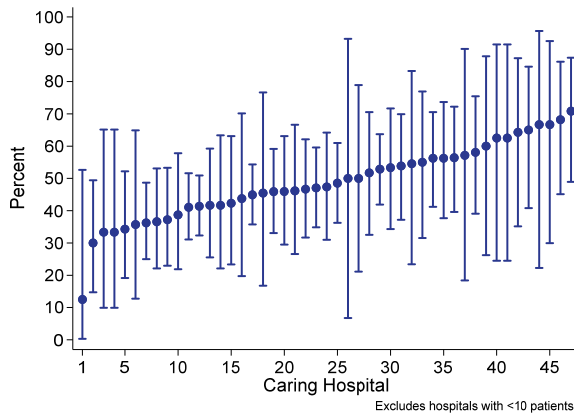
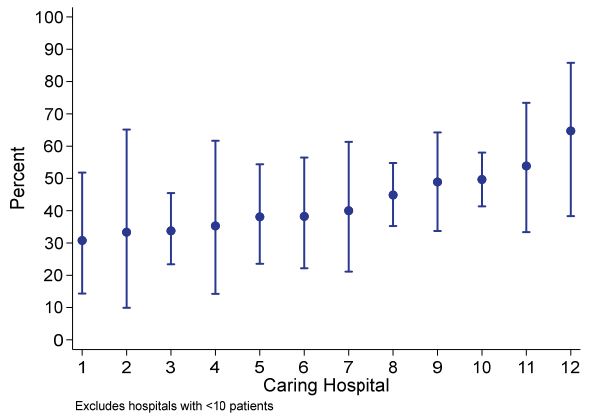


Figure 5.34 shows the proportion of patients with Hb between 110-115g/L; the proportion ranged from 23-60% in Australia and 17-61% in New Zealand.

**Figure 5.34.1 - % Peritoneal Dialysis Patients with Hb 110-115g/L Australia 31 December 2020**



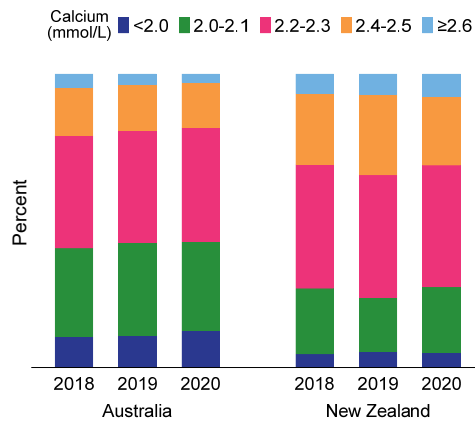
**Figure 5.34.2 - % Peritoneal Dialysis Patients with Hb 110-115g/L New Zealand 31 December 2020**



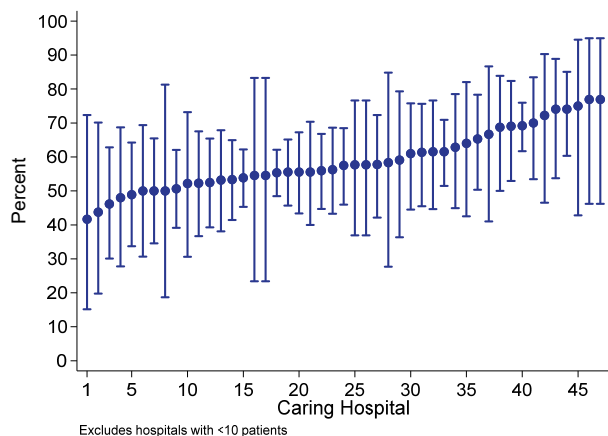
## Biochemistry

Figures 5.35-5.38 present the distributions of calcium and phosphate for patients treated with peritoneal dialysis.

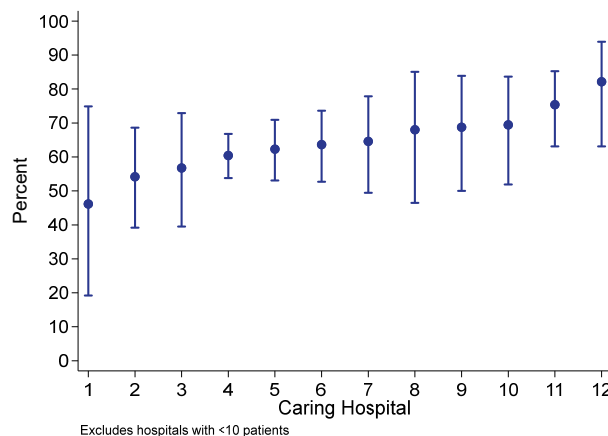
**Figure 5.35 - Serum Calcium - Peritoneal Dialysis - December 2018-2020**



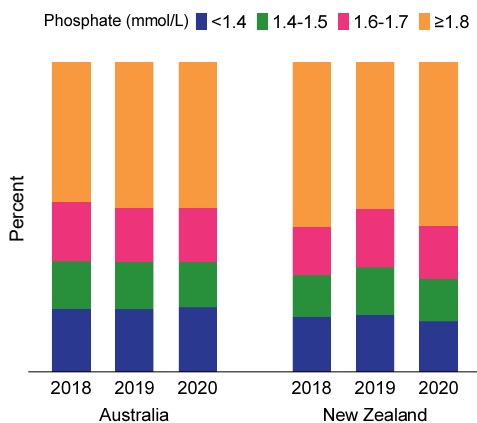
**Figure 5.36.1 - % PD Patients with Calcium 2.1-2.4 mmol/L - Australia 31 December 2020**



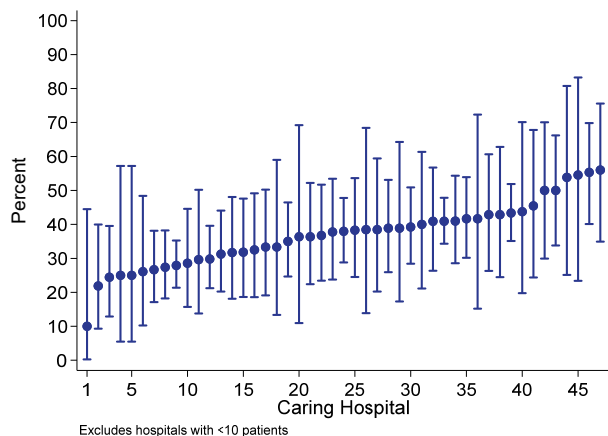
**Figure 5.36.2 - % PD Patients with Calcium 2.1-2.4 mmol/L - New Zealand 31 December 2020**



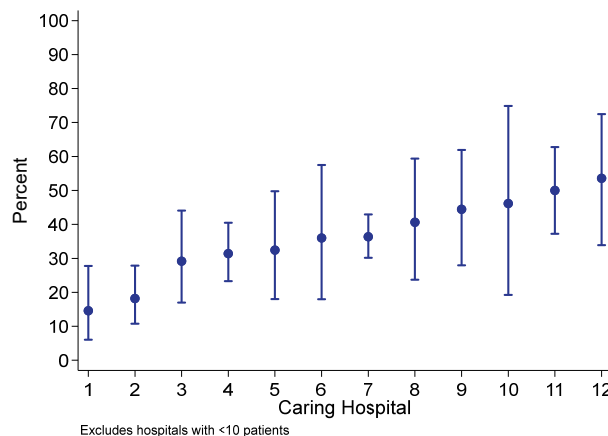
**Figure 5.37 - Serum Phosphate - Peritoneal Dialysis - December 2018-2020**



**Figure 5.38.1 - % PD Patients with Phosphate 0.8-1.6 mmol/L - Australia 31 December 2020**



**Figure 5.38.2 - % PD Patients with Phosphate 0.8-1.6 mmol/L - New Zealand 31 December 2020**



## References

<sup>1</sup> Australian Bureau of Statistics, 2020, Australian Demographic Statistics, Jun 2020, time series spreadsheets, cat. no. 3101.0, viewed 4 Jan 2021, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/3101.0Jun%202020?OpenDocument>

<sup>2</sup> 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, 2020, Estimated Resident Population by Age and Sex (1991+) (Annual-Jun), NZ Infoshare, viewed 4 Jan 2021, <http://archive.stats.govt.nz/infoshare/>