



CHAPTER 4

METHOD AND LOCATION OF DIALYSIS

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AUSTRALIA

Figure 4.1

| Method and Location of Dialysis 2008 - 2012 | | | | | | | |
|---|---------------------|--------------|-------------|-------------|-------------|-------------|-------------|
| Mode of Treatment | | 2008 | 2009 | 2010 | 2011 | 2012 | |
| Aust | Peritoneal Dialysis | APD | 1271 | 1313 | 1279 | 1283 | 1374 |
| | | CAPD | 971 | 889 | 812 | 791 | 853 |
| | | Total | 2242 | 2202 | 2091 | 2074 | 2227 |
| | HD | Hospital | 2327 | 2347 | 2315 | 2381 | 2552 |
| | | Home | 952 | 978 | 981 | 993 | 1048 |
| | | Satellite | 4649 | 4938 | 5317 | 5587 | 5619 |
| Total | | 7928 | 8263 | 8613 | 8961 | 9219 | |
| NZ | Peritoneal Dialysis | APD | 288 | 337 | 359 | 350 | 366 |
| | | CAPD | 475 | 463 | 473 | 442 | 406 |
| | | Total | 763 | 800 | 832 | 792 | 772 |
| | HD | Hospital | 622 | 690 | 733 | 797 | 837 |
| | | Home | 331 | 378 | 425 | 432 | 469 |
| | | Satellite | 390 | 413 | 398 | 368 | 391 |
| Total | | 1343 | 1481 | 1556 | 1597 | 1697 | |

During 2012 there was an increase of 411 (4%) in the total number of prevalent dialysis patients. There were 11,446 patients (507 per million) receiving dialysis treatment at 31st December 2012.

The distribution of these patients across the modalities continues to change (Figures 4.1 and 4.3). The majority (72%) of haemodialysis patients were out of hospital: 11% were dialysing at home and 61% in satellite centres.

Twelve percent of all prevalent dialysis patients were using automated peritoneal dialysis, a further 7% continuous ambulatory peritoneal dialysis, 22% hospital based haemodialysis, 49% satellite haemodialysis and 9% home haemodialysis.

For the first time in several years the proportion of patients receiving peritoneal dialysis (APD and CAPD) increased slightly in 2012, from 18.8 to 19.5%. Automated peritoneal dialysis increased in 2012 to 1374 patients, and continuous ambulatory peritoneal dialysis increased to 853 patients.

The number of patients receiving dialysis treatment rose in all State/Territories in 2012. The number of dialysis patients in relation to the population in each state is shown in Figure 4.2.

Fifty percent of all prevalent dialysis patients were 65 years or older, and 501 patients (4%) were 85 years or older.

Figure 4.2

| Prevalence of Dialysis Dependent Patients By State 2008 - 2012 (per Million Population) | | | | | |
|---|--------------------|--------------------|--------------------|--------------------|--------------------|
| | 2008 | 2009 | 2010 | 2011 | 2012 |
| Queensland | 1885 (441) | 1957 (448) | 2004 (453) | 2012 (450) | 2085 (461) |
| New South Wales* | 3363 (497) | 3434 (501) | 3494 (504) | 3574 (511) | 3707 (525) |
| Aust. Capital Territory** | 235 (422) | 239 (423) | 245 (427) | 264 (453) | 269 (455) |
| Victoria | 2486 (470) | 2531 (469) | 2616 (478) | 2704 (489) | 2792 (498) |
| Tasmania | 179 (359) | 199 (395) | 192 (378) | 204 (399) | 214 (416) |
| South Australia | 630 (394) | 683 (423) | 677 (415) | 712 (435) | 733 (445) |
| Northern Territory | 398 (1801) | 417 (1838) | 441 (1915) | 464 (2006) | 502 (2159) |
| Western Australia | 994 (456) | 1005 (447) | 1035 (451) | 1101 (468) | 1144 (475) |
| Australia | 10170 (476) | 10465 (481) | 10704 (485) | 11035 (494) | 11446 (507) |
| New Zealand | 2106 (493) | 2281 (529) | 2388 (547) | 2389 (542) | 2469 (557) |

* NSW population excludes residents of the Southern Area Health Service
 ** ACT population includes residents of the Southern Area Health Service (Medical services in the ACT service the Southern Area Region of NSW)

AUSTRALIA

For those <15 years, peritoneal dialysis was used in 73%, compared with 23% for 15-24 years, 25% for 25-34 years, 19% for 65-84 years and 11% for ≥ 85 years.

Relative to State/Territory population, the highest prevalence rate of dialysis patients was in the Northern Territory (2,159 per million), with rates in other States/Territories ranging from 416 per million in Tasmania to 525 per million in New South Wales (Figure 4.2).

The age distribution of Patients is shown in Figure 4.4.

Figure 4.3

Method and Location of Dialysis

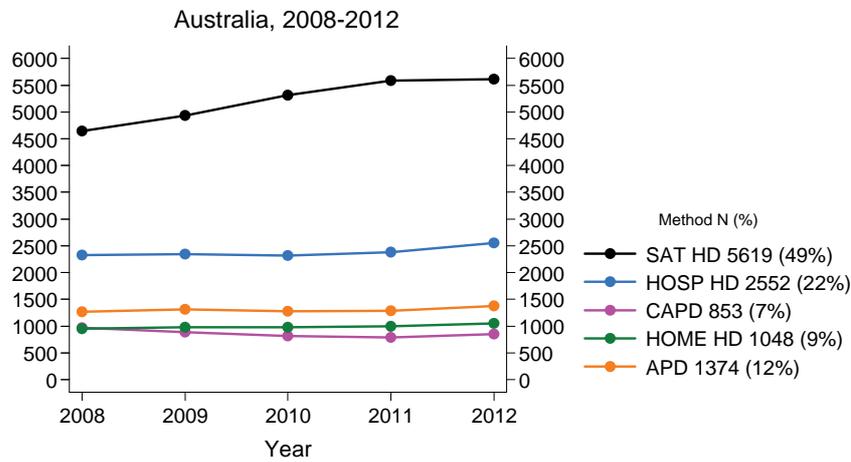


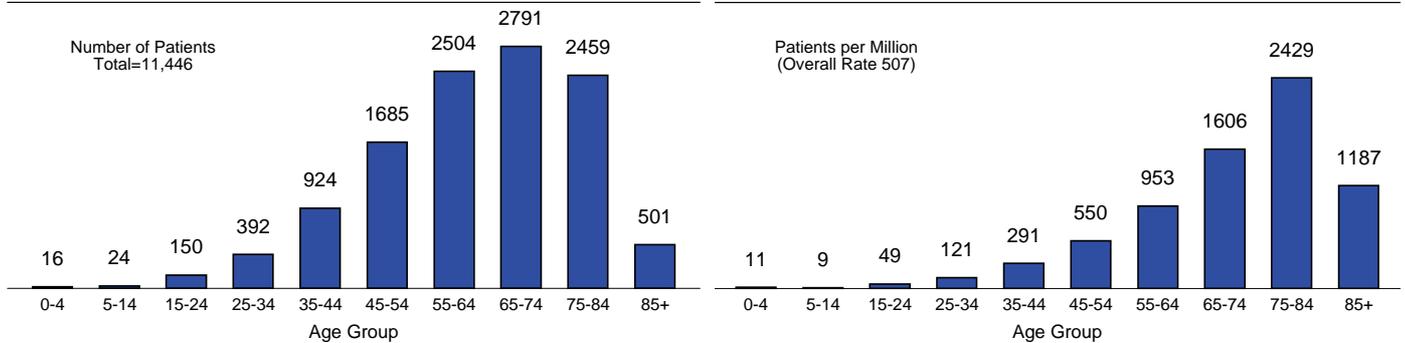
Figure 4.4

Prevalent Dialysis Patients (Australia)

31 December 2012

Prevalent Dialysis Patients (Australia)

31 December 2012





NEW ZEALAND

New Zealand data are shown in Figures 4.1, 4.2, 4.5 and 4.6.

There was an increase of 80 dialysis patients in 2012 (2,389 patients to 2,469), after an increase of only 1 patient for the previous year and 5% in 2010.

There were increases across all age groups between 15-84 in 2012.

Fifty percent of patients were treated with a form of home dialysis (of whom 31% were peritoneal dialysis patients). Numbers treated with automated peritoneal dialysis were similar in 2011 to 2010 (Figure 4.5)

In 2012, for the second year in a row continuous ambulatory peritoneal dialysis decreased.

Together, hospital haemodialysis and satellite dialysis accounted for 50% of patients in 2012, similar to the previous two years. Satellite haemodialysis numbers increased 3% in 2012 (391 patients).

In contrast to Australia a greater percentage of patients were at home. Of those not at home, a greater proportion were in hospital rather than satellite HD.

Figure 4.5

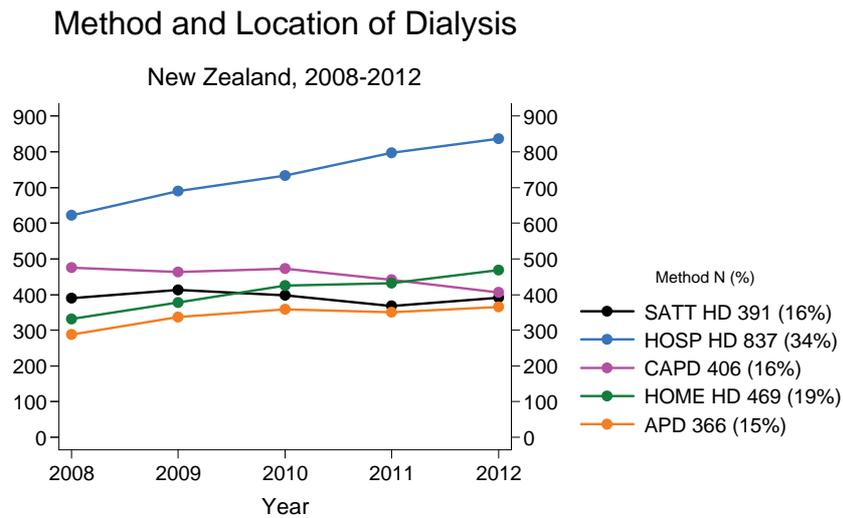


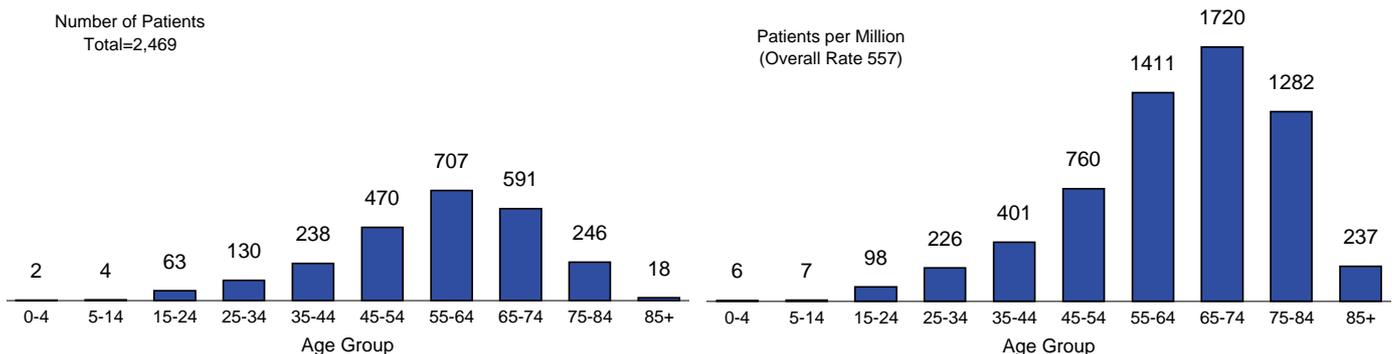
Figure 4.6

Prevalent Dialysis Patients (New Zealand)

31 December 2012

Prevalent Dialysis Patients (New Zealand)

31 December 2012

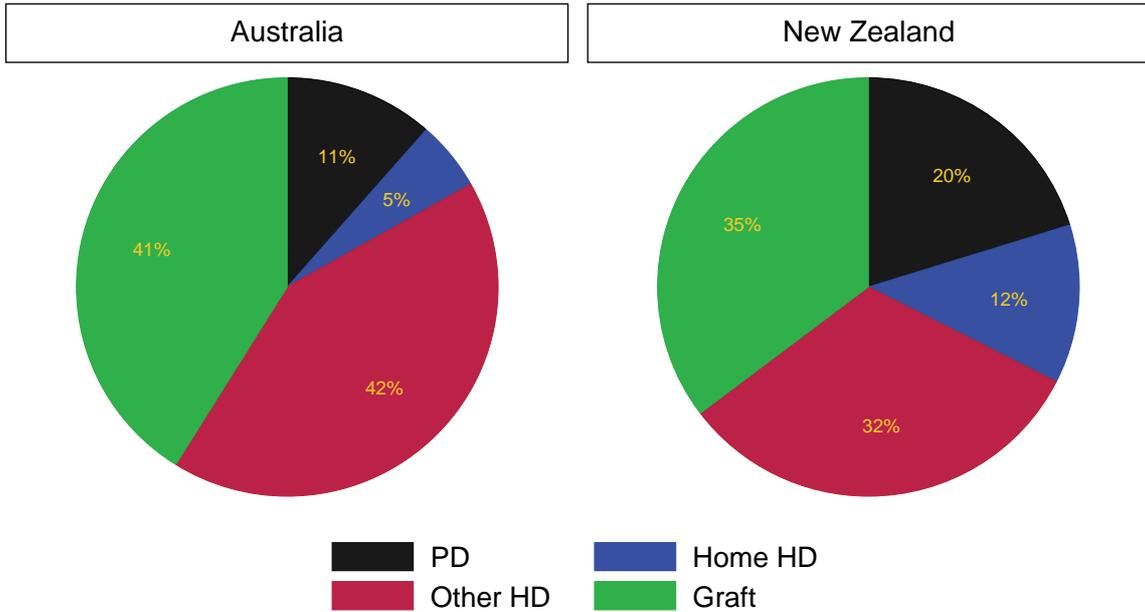


Home RRT modalities by country

The remainder of the chapter explores differences in home-based renal replacement therapies (peritoneal dialysis, home haemodialysis and transplantation). Figures 4.7 and 4.8 show the distribution of prevalent renal replacement modality by country. Home dialysis therapies (HD and PD) are used more frequently in New Zealand, although the prevalence of transplantation is higher in Australia.

Figure 4.7

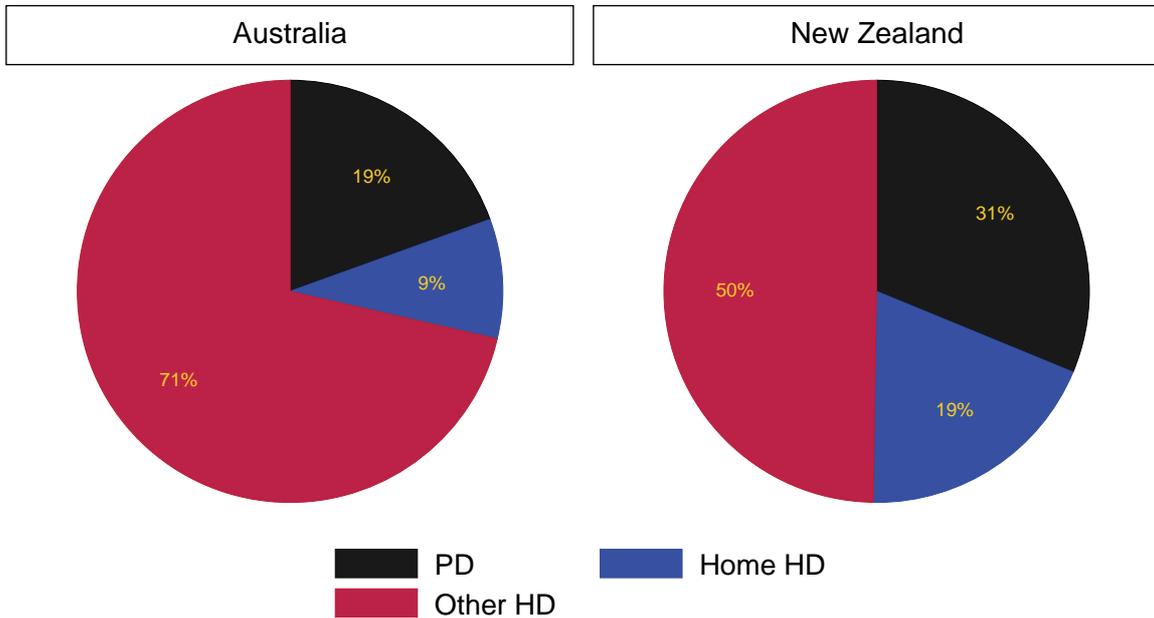
RRT Modality by Country



Modality at end of 2012

Figure 4.8

Dialysis Modality by Country



Modality at end of 2012, dialysis only



The variation in renal replacement therapy modality between states at the end of 2012 is shown in Figures 4.9 and 4.10. There is considerable variation in the pattern between states, both in the split of patients treated with kidney transplantation vs dialysis and between the differing modalities of dialysis.

Figure 4.9

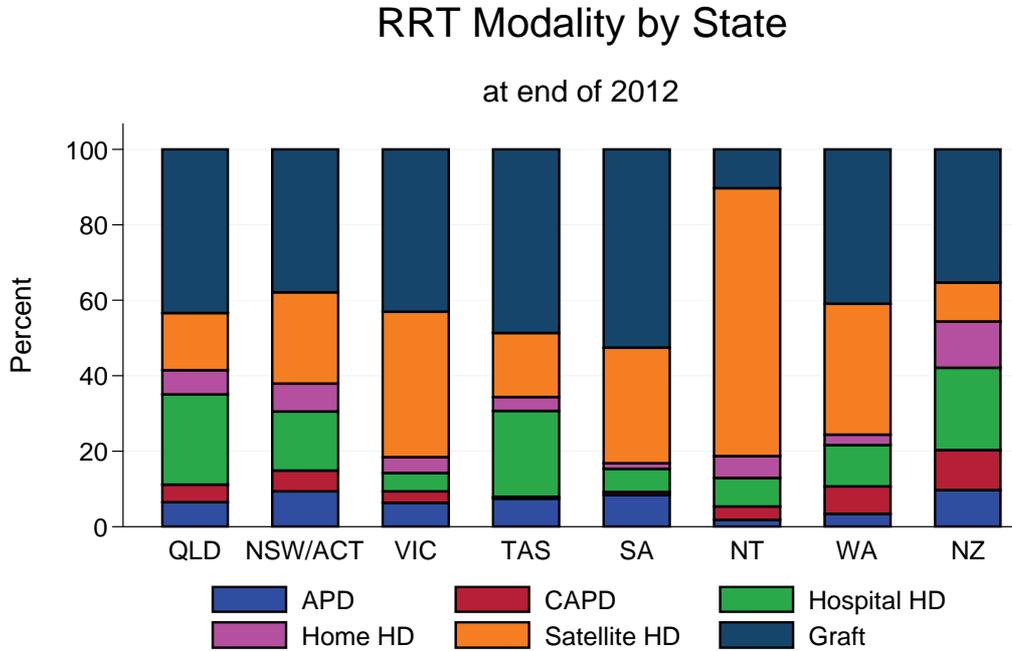
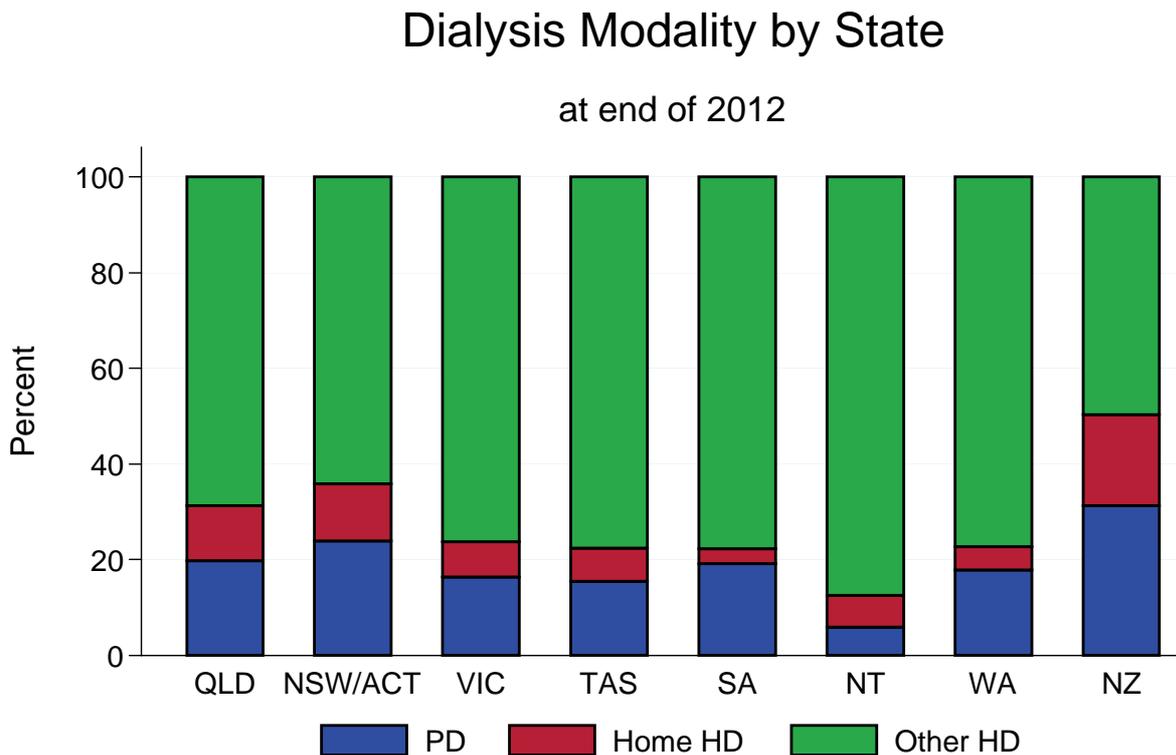


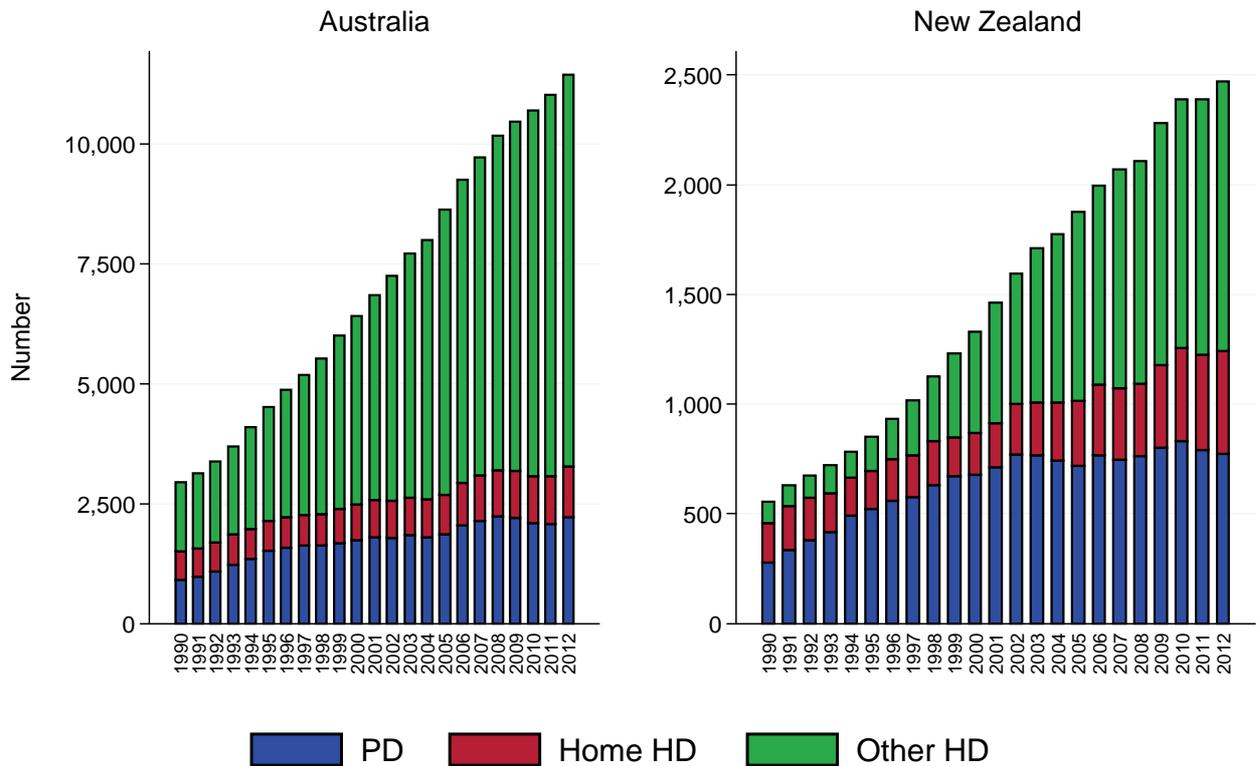
Figure 4.10



Home Dialysis Over Time

There has been a growing interest in home therapies in recent years; the temporal trends in utilisation of home dialysis therapies are shown in Figure 4.11. For Australia, although there has been some increase in numbers over the last 10 years treated with both home haemodialysis and peritoneal dialysis, this increase is much less than the overall increase in number of prevalent patients, hence the proportion treated at home has fallen. For New Zealand, there has been continued growth in home haemodialysis over the last 5-10 years, but it can be seen the proportion of patients treated at home is also falling over time.

Figure 4.11



Prevalent numbers at year's end

The trends in home dialysis modality utilisation between states, and across age groups, are shown in Figures 4.11 - 4.15.

There have been different patterns in utilisation of these therapies in different states. Perhaps the most striking example is WA where there has been a large increase in the numbers receiving home HD, whereas the numbers receiving PD treatment have been static.

For both countries strong growth is seen in numbers of home HD patients in all age groups over 45 years. In contrast, numbers of people treated with PD are stable or in many cases falling.



Figure 4.12

Number of PD Patients at End of 2012

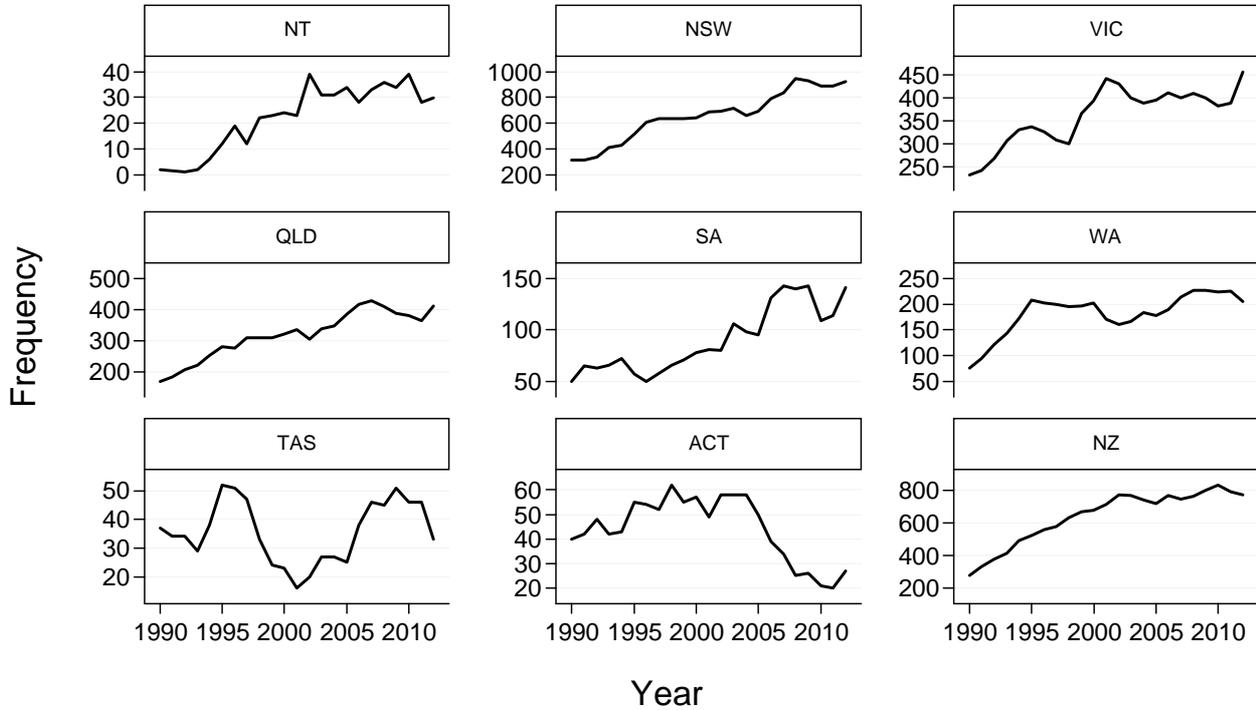


Figure 4.13

Number of Home HD Patients at End of 2012

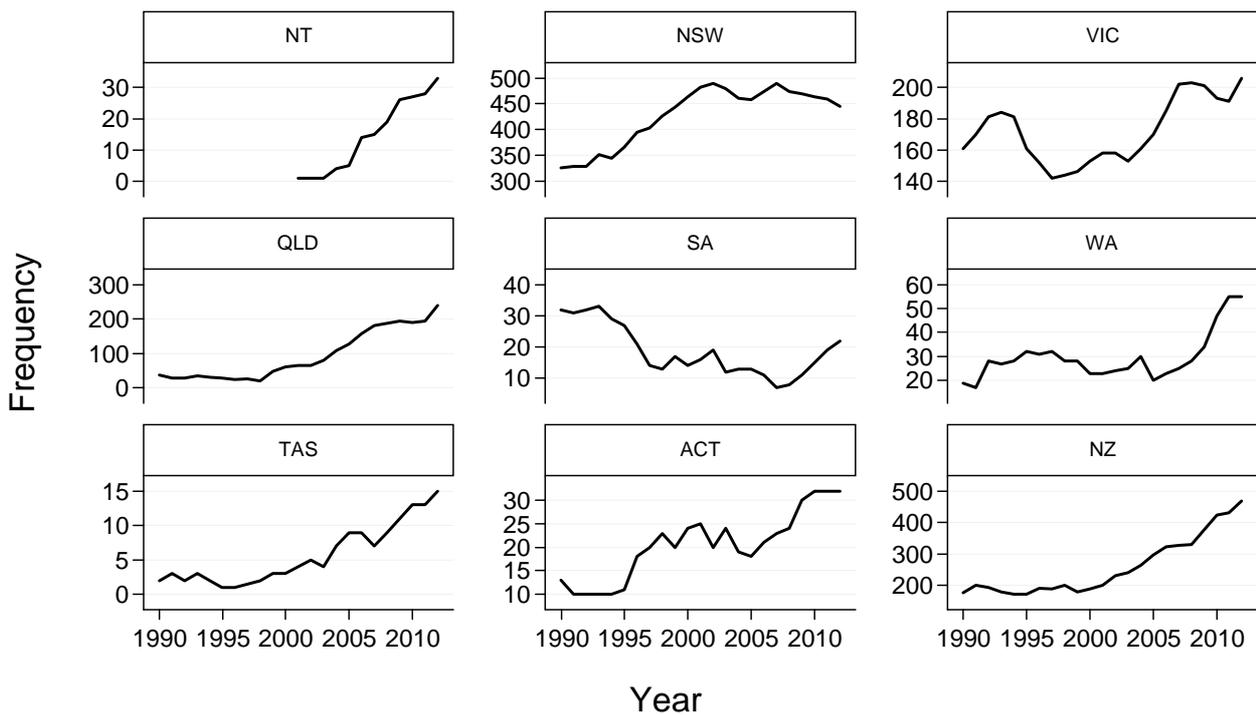


Figure 4.14

Number of Home HD Patients

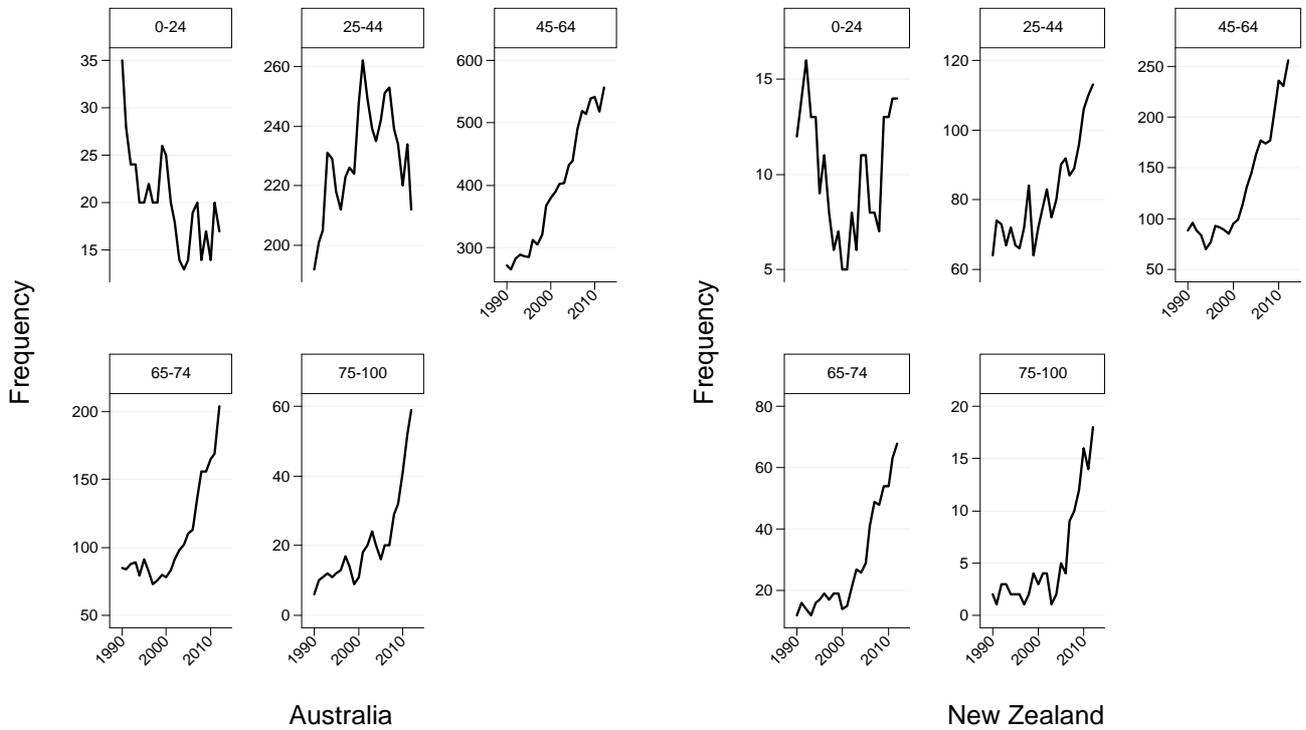


Figure 4.15

Number of PD Patients

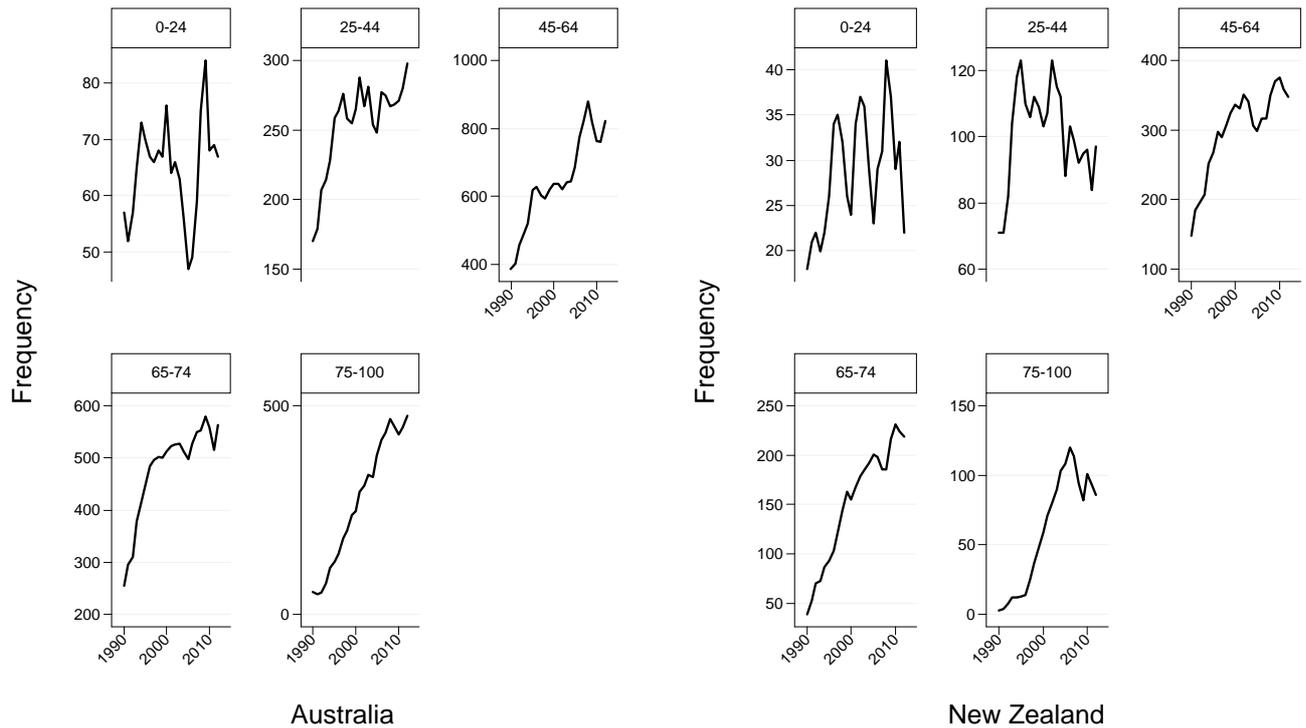




Figure 4.16 shows the numbers of patients (of all ages) in each state performing home dialysis modalities, compared with other (satellite and hospital) HD.

| Figure 4.16 | | | | |
|--|------|---------|----------|--------------|
| Home Modality (HD & PD) numbers by State | | | | |
| Current state | PD | Home HD | Other HD | Total |
| NT | 411 | 240 | 1434 | 2085 |
| NSW/ACT | 950 | 477 | 2549 | 3976 |
| Vic | 457 | 206 | 2129 | 2792 |
| Qld | 33 | 15 | 166 | 214 |
| SA | 141 | 22 | 570 | 733 |
| WA | 30 | 33 | 439 | 502 |
| Tas | 205 | 55 | 884 | 1144 |
| NZ | 772 | 469 | 1228 | 2469 |
| Total | 2999 | 1517 | 9399 | 13915 |

Figure 4.17 shows in more detail the trend in each of the home modalities by state for patients ≥ 65 years.

| Figure 4.17 | | | | | | | | | | |
|---------------------------------|----------|-----------|---------|-----|-----|----|-----|-----|-------------|-------------|
| Home Dialysis ≥ 65 years | | | | | | | | | | |
| By Australian State and Country | | | | | | | | | | |
| Year | Dialysis | Australia | | | | | | | | New Zealand |
| | | NT | NSW/ACT | Vic | Qld | SA | WA | Tas | Total | |
| 2008 | PD | 6 | 473 | 166 | 172 | 79 | 102 | 24 | 1022 | 280 |
| | Home HD | 1 | 97 | 44 | 37 | 0 | 4 | 2 | 185 | 58 |
| 2009 | PD | 5 | 492 | 162 | 173 | 74 | 102 | 23 | 1031 | 298 |
| | Home HD | 1 | 100 | 43 | 37 | 0 | 5 | 2 | 188 | 66 |
| 2010 | PD | 8 | 477 | 164 | 157 | 65 | 98 | 21 | 990 | 332 |
| | Home HD | 1 | 102 | 47 | 41 | 3 | 8 | 4 | 206 | 70 |
| 2011 | PD | 5 | 461 | 168 | 145 | 60 | 100 | 25 | 964 | 317 |
| | Home HD | 1 | 109 | 47 | 47 | 4 | 9 | 4 | 221 | 77 |
| 2012 | PD | 6 | 476 | 203 | 163 | 75 | 94 | 22 | 1039 | 305 |
| | Home HD | 2 | 117 | 54 | 60 | 11 | 13 | 6 | 263 | 86 |