

## **CHAPTER 4**

### **METHOD AND LOCATION OF DIALYSIS**

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**Figure 4.1**

<b>Method and Location of Dialysis 2001 - 2005</b>							
		Mode of Treatment	2001	2002	2003	2004	2005
<b>Aust</b>	<b>PD</b>	APD	501	620	736	763	784
		CAPD	1307	1172	1107	1025	1027
		<b>Total</b>	<b>1808</b>	<b>1792</b>	<b>1843</b>	<b>1788</b>	<b>1811</b>
	<b>HD</b>	Hospital	1802	1994	2083	2071	2289
		Home	773	779	778	797	799
		Satellite	2473	2709	3026	3338	3629
<b>Total</b>		<b>5048</b>	<b>5482</b>	<b>5887</b>	<b>6206</b>	<b>6717</b>	
<b>NZ</b>	<b>PD</b>	APD	112	135	153	181	180
		CAPD	601	635	615	564	540
		<b>Total</b>	<b>713</b>	<b>770</b>	<b>768</b>	<b>745</b>	<b>720</b>
	<b>HD</b>	Hospital	370	372	441	484	548
		Home	201	230	240	259	290
		Satellite	181	228	265	288	296
<b>Total</b>		<b>752</b>	<b>830</b>	<b>946</b>	<b>1031</b>	<b>1134</b>	

**AUSTRALIA**

During the past year, there was an increase of 534 (7%) in the total number of prevalent dialysis patients. There were 8,528 patients (420 per million) receiving dialysis treatment at the end of the year to 31<sup>st</sup> December 2005.

The distribution of these patients across the modalities continues to slowly change (Figure 4.1 and 4.3). The number of patients treated by PD in Australia and New Zealand remains constant in contrast to the increase in haemodialysis. The majority (73%) were out of hospital: 30% were dialysing at home and 43% in satellite centres.

Twelve percent of all prevalent dialysis patients were using continuous ambulatory peritoneal dialysis, 9% automated peritoneal dialysis, 27% hospital based haemodialysis, 43% satellite haemodialysis and 9% home haemodialysis.

Automated peritoneal dialysis continues to increase each year, rising 3% (784 patients) in 2005. This has been at the expense of continuous ambulatory peritoneal dialysis, which remained similar in numbers to last year after decreasing (7% fewer in 2004 compared to 2003). The overall previous increases were 4% (763 patients) in 2004 and 19% (736 patients) in 2003. Satellite haemodialysis increased by 9% compared to 10% in 2004.

Forty six percent of all prevalent dialysis patients were 65 years and older and 175 patients (2%) were 85 years or more, an increase of 34% in 2005. An increase occurred in all age groups 35 years or older, though the increase in the 65-84 year group was 8% (280 patients), after a 4% (129 patients) increase in 2004 and a 9% (272 patients) increase in 2003.

**Figure 4.2**

<b>State Distribution of Dialysis Dependent Patients 2001 - 2005 (per Million Population)</b>					
	2001	2002	2003	2004	2005
Queensland	1094 (301)	1204 (324)	1340 (353)	1443 (372)	1592 (402)
New South Wales *	2339 (367)	2434 (378)	2547 (392)	2549 (390)	2705 (412)
Aust. Capital Territory *	159 (313)	178 (345)	187 (360)	184 (351)	191 (361)
Victoria	1851 (385)	1932 (398)	1992 (405)	2054 (413)	2161 (430)
Tasmania	123 (260)	143 (303)	154 (323)	148 (307)	156 (321)
South Australia	434 (287)	457 (301)	505 (331)	511 (333)	567 (368)
Northern Territory	210 (1061)	233 (1173)	247 (1245)	275 (1376)	308 (1519)
Western Australia	646 (340)	693 (360)	758 (388)	830 (419)	848 (422)
<b>Australia</b>	<b>6856 (353)</b>	<b>7274 (370)</b>	<b>7730 (389)</b>	<b>7994 (397)</b>	<b>8528 (420)</b>
<b>New Zealand</b>	<b>1465 (378)</b>	<b>1600 (406)</b>	<b>1714 (428)</b>	<b>1776 (437)</b>	<b>1854 (452)</b>

\*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)

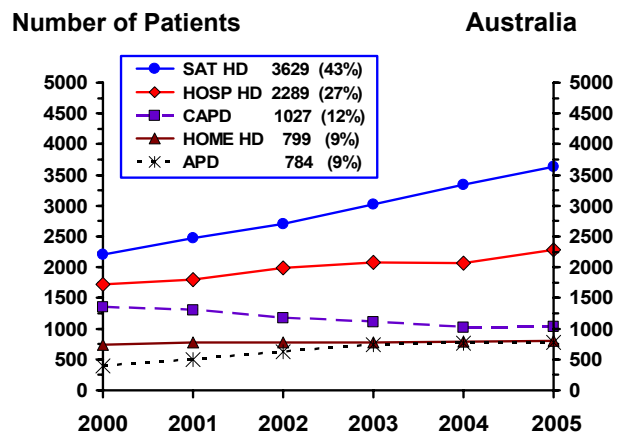
The differences with age, dialysis method and location are shown in Appendix II (pages 19-25). For those <15 years, peritoneal dialysis was used in 75% (82% in 2004), compared to 15% for 25-34 years, 22% for 65-84 years and 15% for >=85 years.

The number of patients receiving dialysis treatment rose in all States/Territories in 2005. Northern Territory rose by 12%, South Australia by 11%, Queensland by 10%, New South Wales by 6%, Victoria and Tasmania by 5%, the ACT by 4% and Western Australia by 2%. The number of dialysis patients in relation to population in each State is shown in Figure 4.2.

In relation to State/Territory population, the highest prevalence rate of dialysis patients was in the Northern Territory (1,519 per million), with rates in other States/Territories ranging from 430 per million in Victoria to 321 per million in Tasmania (Figure 4.2).

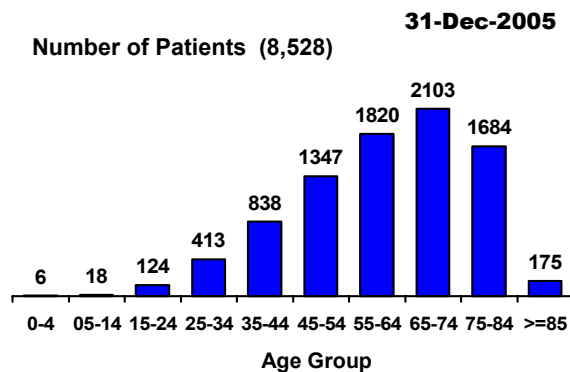
**Figure 4.3**

**Method and Location of Dialysis 2000 - 2005**



**Figure 4.4**

**Prevalent Dialysis Patients (Australia)**



**Prevalent Dialysis Patients (Australia)**

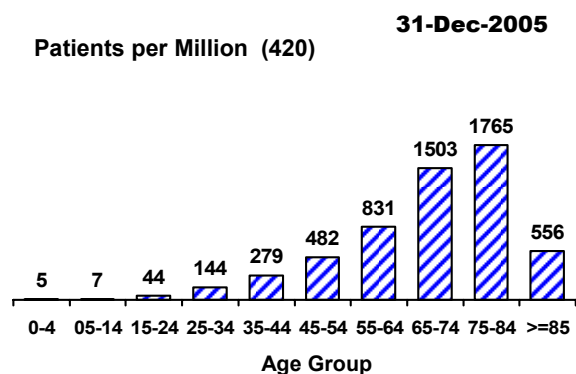
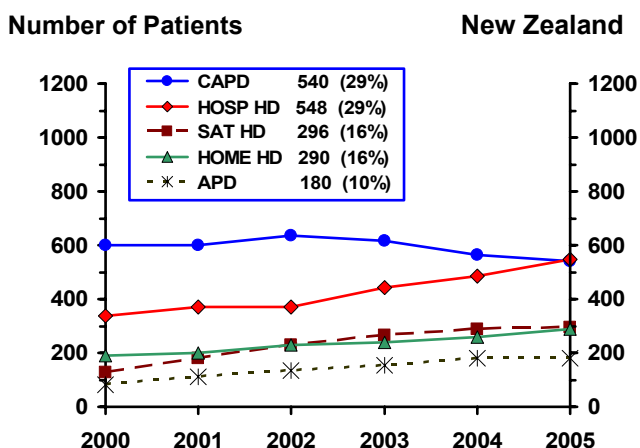




Figure 4.5

**Method and Location of Dialysis 2000 - 2005**



**NEW ZEALAND**

Figures 4.1, 4.2, 4.5 and 4.6.

There was a 4% increase in dialysis patient numbers after a similar rise of 4% last year and 7% in 2003. All age groups 45 years and over increased in 2005. The largest increases were 10% (38 patients) in the 65-74 year age group and 27% (3 patients) in the >=85 year group. Fifty four percent of patients were treated with a form of home dialysis (of whom 71% were peritoneal dialysis patients).

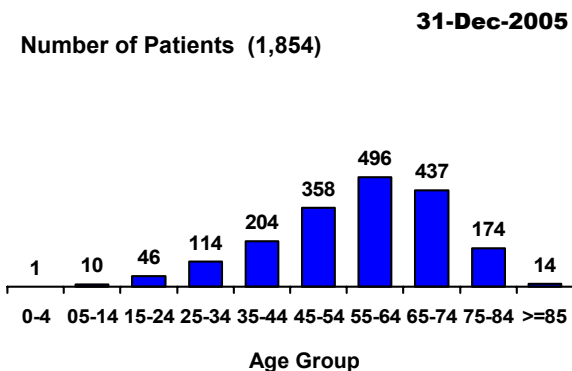
Home automated peritoneal dialysis remained similar to last year (180 patients) after increases of 18% (181 patients) in 2004 and 13% (153 patients) in 2003.

Continuous ambulatory peritoneal dialysis continues to decrease: this year by 4% (540 patients compared to 564 in 2004 and 614 in 2003).

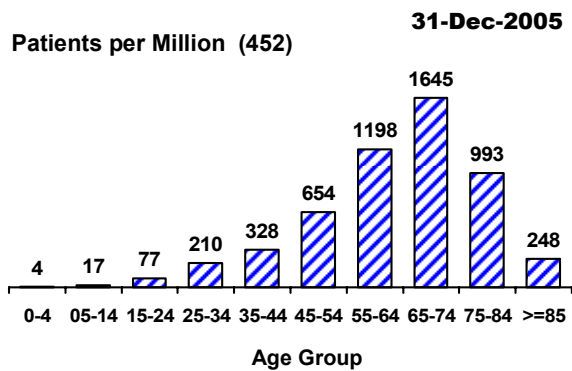
Together, hospital haemodialysis and satellite dialysis accounted for 46% of patients in 2005, increasing from 43% in 2004 and 41% in 2003. Satellite haemodialysis numbers increased 3% (296 patients in 2005, from 288 patients in 2004 after a 9% increase in numbers from 265 patients in 2003).

Figure 4.6

**Prevalent Dialysis Patients (New Zealand)**



**Prevalent Dialysis Patients (New Zealand)**

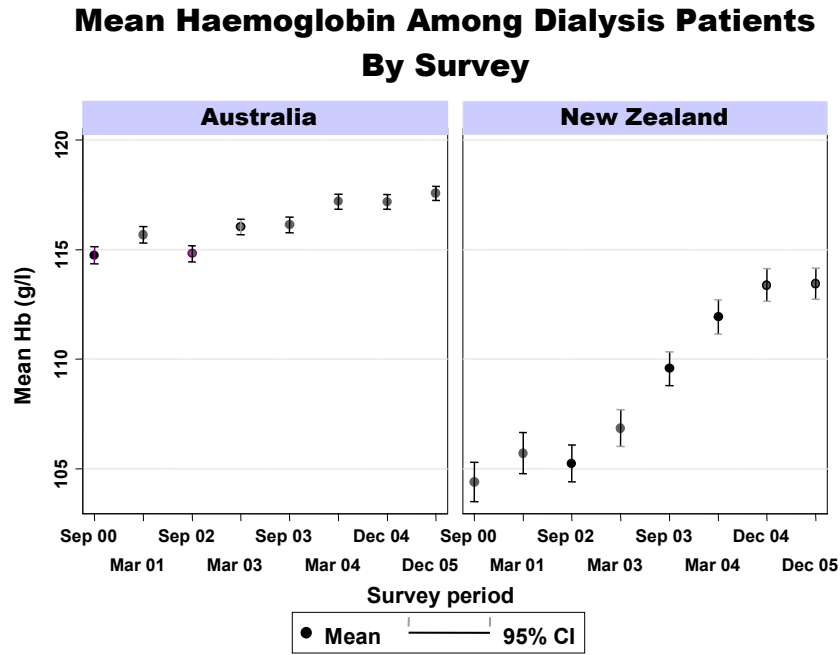


**ERYTHROPOIETIC AGENTS**

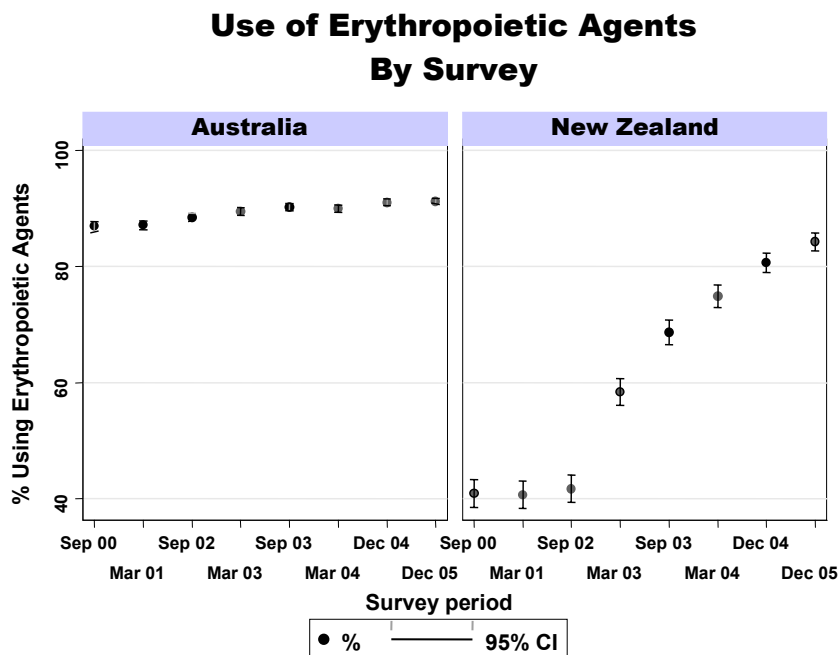
In Australia, mean haemoglobin and usage of erythropoietin agents continues to slowly increase (Figure 4.7).

In New Zealand, mean haemoglobin is starting to plateau despite increasing usage of erythropoietin following regulatory changes late in 2002.

**Figure 4.7**



**Figure 4.8**





The relationships between haemoglobin and iron studies is shown in Figures 4.9 and 4.10.

**Figure 4.9**

**Patients Receiving Erythropoietic Agents  
By Haemoglobin and Ferritin Concentration  
Alive on All Modes of Dialysis at 31-Dec-2005**

Haemoglobin	Ferritin Levels (ug/L)					Total
	00-49	50-99	100-199	200-499	>=500	
<b>Australia</b>						
<=89	16 (4%)	17 (4%)	39 (4%)	102 (4%)	120 (4%)	<b>294 (4%)</b>
90-109	90 (24%)	108 (25%)	246 (26%)	647 (22%)	696 (24%)	<b>1787 (24%)</b>
110-129	187 (49%)	195 (45%)	447 (46%)	1490 (51%)	1492 (52%)	<b>3811 (51%)</b>
130-149	76 (20%)	102 (23%)	208 (22%)	617 (21%)	525 (19%)	<b>1528 (20%)</b>
>=150	12 (3%)	15 (3%)	20 (2%)	42 (2%)	31 (1%)	<b>120 (1%)</b>
<b>Total</b>	<b>381 (100%)</b>	<b>437 (100%)</b>	<b>960 (100%)</b>	<b>2898 (100%)</b>	<b>2864 (100%)</b>	<b>7540 (100%)</b>
<b>New Zealand</b>						
<=89	3 (4%)	6 (6%)	20 (9%)	42 (7%)	56 (11%)	<b>127 (8%)</b>
90-109	20 (29%)	34 (34%)	79 (34%)	201 (35%)	171 (32%)	<b>505 (34%)</b>
110-129	36 (51%)	36 (37%)	89 (39%)	243 (42%)	243 (46%)	<b>647 (43%)</b>
130-149	10 (14%)	22 (22%)	38 (16%)	86 (15%)	59 (11%)	<b>215 (14%)</b>
>=150	1 (2%)	1 (1%)	5 (2%)	4 (1%)	2 (<1%)	<b>13 (1%)</b>
<b>Total</b>	<b>70 (100%)</b>	<b>99 (100%)</b>	<b>231 (100%)</b>	<b>576 (100%)</b>	<b>531 (100%)</b>	<b>1507 (100%)</b>

**Figure 4.10**

**Patients Receiving Erythropoietic Agents  
By Haemoglobin and Transferrin Saturation  
Alive on All Modes of Dialysis at 31-Dec-2005**

Haemoglobin	Transferrin Saturation Levels (%)				Total
	00-19	20-24	25-29	>=30	
<b>Australia</b>					
<=89	140 (7%)	45 (3%)	30 (2%)	76 (3%)	<b>291 (4%)</b>
90-109	601 (30%)	380 (24%)	271 (21%)	501 (20%)	<b>1753 (24%)</b>
110-129	937 (46%)	825 (52%)	642 (51%)	1325 (52%)	<b>3729 (50%)</b>
130-149	326 (16%)	308 (19%)	299 (24%)	579 (23%)	<b>1512 (20%)</b>
>=150	29 (1%)	24 (2%)	22 (2%)	44 (2%)	<b>119 (2%)</b>
<b>Total</b>	<b>2033 (100%)</b>	<b>1582 (100%)</b>	<b>1264 (100%)</b>	<b>2525 (100%)</b>	<b>7404 (100%)</b>
<b>New Zealand</b>					
<=89	43 (13%)	15 (6%)	16 (7%)	35 (8%)	<b>109 (8%)</b>
90-109	131 (39%)	102 (42%)	70 (31%)	120 (28%)	<b>423 (34%)</b>
110-129	124 (36%)	91 (37%)	100 (45%)	202 (47%)	<b>517 (42%)</b>
130-149	38 (11%)	34 (14%)	38 (17%)	70 (16%)	<b>180 (15%)</b>
>=150	4 (1%)	3 (1%)	1 (<1%)	4 (1%)	<b>12 (1%)</b>
<b>Total</b>	<b>340 (100%)</b>	<b>245 (100%)</b>	<b>225 (100%)</b>	<b>431 (100%)</b>	<b>1241 (100%)</b>