

CHAPTER 2

NEW PATIENTS

COMMENCING TREATMENT IN 2009

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Figure 2.1

Annual Intake of New Patients 2005 - 2009 (Number Per Million Population)					
	2005	2006	2007	2008	2009
Queensland	464 (117)	496 (121)	468 (112)	531 (124)	486 (110)
New South Wales	724 (110)	768 (116)	758 (113)	805 (119)	717 (104)
Aust. Capital Territory	49 (93)	55 (102)	55 (100)	61 (110)	41 (72)
Victoria	525 (105)	565 (110)	542 (104)	537 (101)	541 (100)
Tasmania	38 (78)	51 (104)	55 (111)	54 (108)	53 (105)
South Australia	171 (111)	184 (117)	167 (105)	185 (115)	195 (120)
Northern Territory	85 (419)	76 (361)	76 (354)	89 (405)	72 (320)
Western Australia	235 (117)	235 (114)	257 (122)	272 (126)	232 (104)
Australia	2291 (113)	2430 (117)	2378 (113)	2534 (119)	2337 (107)
New Zealand	461 (112)	500 (119)	466 (110)	497 (116)	567 (131)

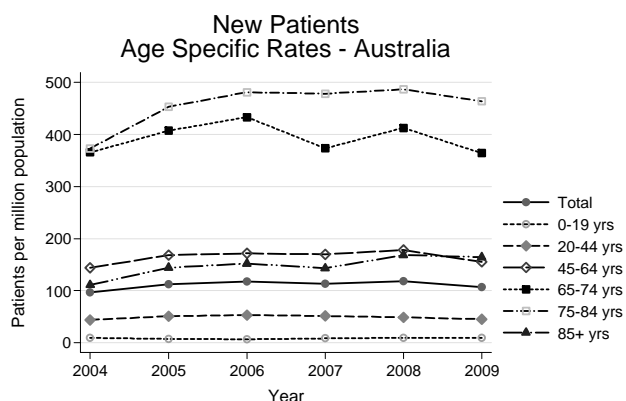
INTAKE OF NEW PATIENTS

There were 2337 new patients who commenced treatment for end-stage renal failure in Australia in 2009, a rate of 107 per million population per year.

This was a decrease of 8% from last year, following a 7% increase in 2008 and a 2% decrease in 2007. Overall, incidence rates appear to have stabilised over the past five years.

In New Zealand, the number of new patients entering renal failure programs was 567, a rate of 131 per million of population. This was the highest number ever reported and an increase of 14% following a 7% increase in 2008.

Figure 2.2



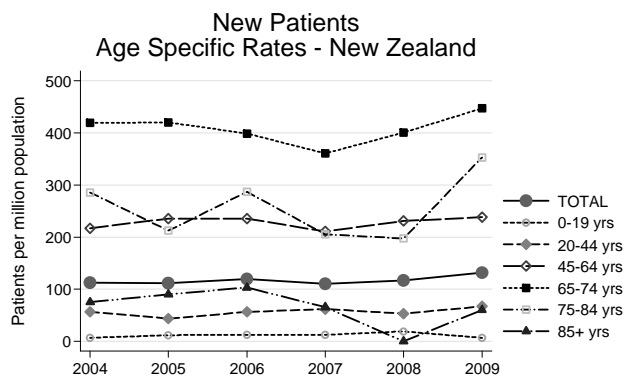
AGE OF NEW PATIENTS

In Australia in 2009, all age groups decreased in acceptance of new patients. The 0-19 year age and the ≥ 85 year age group were only slightly lower.

The largest decreases were in the groups 65-74 years, which fell from 413 to 364 per million (617 to 566 patients), the 45-64 year group, which fell from 178 to 155 per million (957 to 850 patients) and the 75-84 year group, from 487 to 464 per million (474 to 454 patients) (Figure 2.2). The older age groups are examined in more detail in Figure 2.4.

The mean age of patients entering programs in Australia in 2009 was 60.7 years and the median 63.4 years (Figure 2.5).

Figure 2.3



In New Zealand, the mean age of patients entering was 57.6 years and the median 59.1 years (Figure 2.5).

The age specific rates of acceptance increased in all groups except the 0-19 year group, which fell from 19 to seven per million (23 patients to eight patients).

The largest increases were in the 75-84 year group from 197 to 352 per million (36 to 65 patients), the 20-44 year group from 53 to 67 per million (78 to 99 patients), the 65-74 year group from 401 to 447 per million (117 to 135 patients), the 45-64 year age group from 231 to 238 per million (243 to 256 patients) and the ≥ 85 year age group rose to 60 per million (there were no patients in 2008 to four patients this year), shown in Figure 2.3.

Within the older age groups in Australia, only the 75-79 and the ≥ 85 year age groups increased in numbers in 2009, as shown in Figure 2.4.

In New Zealand there were increases in all age groups in 2009.

Rates of new patients aged ≥ 85 years remained similar in Australia in 2009, 164 per million (63 patients) to 167 per million (61 patients) in 2008. There were four patients in this age group in New Zealand in 2009.

Rates in most age groups ≥ 70 years, were higher in Australia than in New Zealand except for the age group 70-74 years which was higher in New Zealand (476 per million and in Australia 417 per million population).

Figure 2.4

Acceptance of Elderly New Patients 2005 - 2009
(Number Per Million Population)

Country	Age Groups	2005	2006	2007	2008	2009
Australia	60-64 years	236 (250)	252 (255)	271 (255)	284 (252)	256 (219)
	65-69 years	261 (338)	280 (359)	248 (308)	302 (363)	280 (322)
	70-74 years	304 (485)	332 (528)	295 (458)	315 (475)	286 (417)
	75-79 years	266 (481)	300 (544)	284 (516)	281 (512)	290 (529)
	80-84 years	162 (404)	161 (397)	179 (432)	193 (456)	164 (381)
	>=85 years	44 (140)	49 (152)	49 (142)	61 (167)	63 (164)
	Total	1273 (352)	1374 (374)	1326 (347)	1436 (363)	1339 (328)
New Zealand	60-64 years	69 (378)	62 (332)	57 (289)	64 (302)	71 (321)
	65-69 years	63 (429)	61 (392)	56 (343)	66 (398)	73 (425)
	70-74 years	49 (409)	49 (408)	47 (384)	51 (405)	62 (476)
	75-79 years	28 (275)	29 (280)	28 (268)	29 (277)	49 (467)
	80-84 years	9 (124)	22 (297)	9 (119)	7 (90)	16 (202)
	>=85 years	5 (90)	6 (103)	4 (66)	0 (0)	4 (60)
	Total	223 (328)	229 (328)	201 (278)	217 (289)	275 (355)

STATE OF ORIGIN OF NEW PATIENTS

The age at start of dialysis varied between States (Figure 2.5). There was a decrease in the number of new renal replacement therapy patients in Australia in 2009 in most States except South Australia and Victoria. The highest acceptance rates were in the Northern Territory (320 per million) and South Australia (120 per million) and the lowest in the ACT (72 per million) and Victoria (100 per million) (Figure 2.1). Age specific rates for each State are shown in Figure 2.7.

Figure 2.5

Age and Gender of New Patients 1-Jan-2009 to 31-Dec-2009
(n = Number of Patients)

Age Groups Years	QLD (n=486)		NSW (n=717)		ACT (n=41)		VIC (n=541)		TAS (n=53)		SA (n=195)		NT (n=72)		WA (n=232)		AUST (n=2337)		NZ (n=567)	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M
00-04	1	1	4	3	0	0	1	1	0	0	0	1	0	0	0	0	6	6	1	0
05-14	2	4	3	3	0	0	2	3	0	0	0	0	0	0	0	2	7	12	1	1
15-24	10	6	5	11	0	0	6	6	1	2	0	3	1	0	1	4	24	32	5	6
25-34	8	11	22	16	2	1	14	14	0	1	0	6	3	0	10	6	59	55	9	22
35-44	17	28	17	33	2	3	15	29	2	4	6	10	8	7	6	16	73	130	31	31
45-54	34	41	54	36	1	2	28	57	7	5	9	14	14	15	15	22	162	192	52	78
55-64	34	61	59	97	4	5	40	81	3	9	9	23	12	5	18	36	179	317	47	79
65-74	46	60	70	118	5	7	47	86	7	3	18	43	1	5	13	37	207	359	54	81
75-84	41	56	56	93	4	4	36	68	3	6	19	26	0	1	22	19	181	273	29	36
>=85	8	17	8	9	1	0	2	5	0	0	4	4	0	0	1	4	24	39	3	1
Total	201	285	298	419	19	22	191	350	23	30	65	130	39	33	86	146	922	1415	232	335
Mean	60.1	61.4	60	62.4	61.8	61.1	59	61	59.1	56.6	66.8	62.6	50.1	53	59.4	59.7	59.8	61.2	57.5	57.6
All	60.8		61.4		61.4		60.3		57.7		64		51.4		59.6		60.7		57.6	
Median	63.6		64.7		65.2		62.9		58		68.3		50.4		60.6		63.4		59.1	
Range	2.6 - 95.1		0.3 - 91.2		31.1 - 85.7		0.6 - 90.8		17.7 - 84.7		1.2 - 88.5		22.6 - 80.4		11.1 - 89.5		0.3 - 95.1		3.5 - 88.0	



Figure 2.6

Incidence rates (95% confidence intervals) for new RRT patients by State.
 Note different scales for each State; these are crude incidence rates, not age-adjusted.

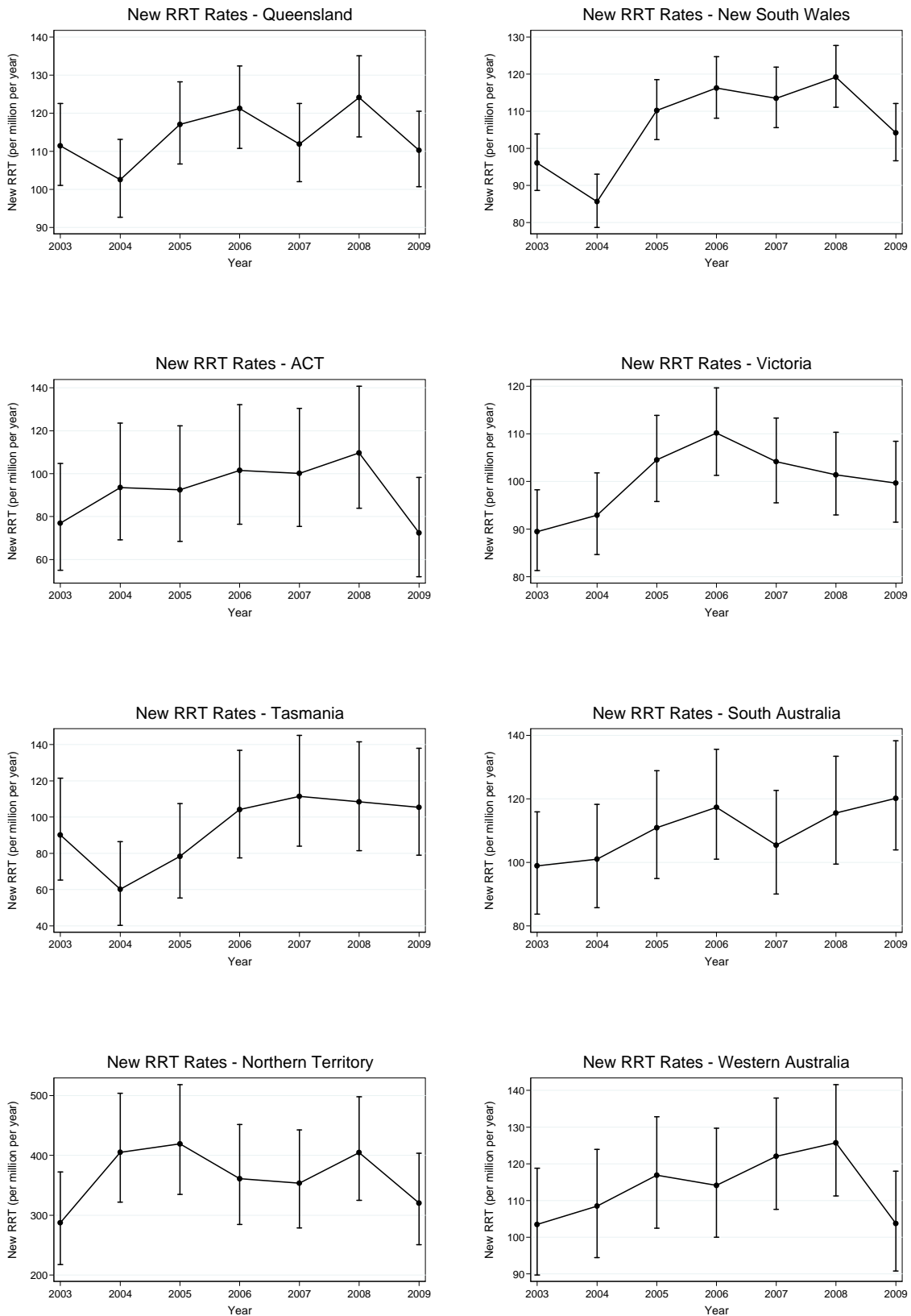
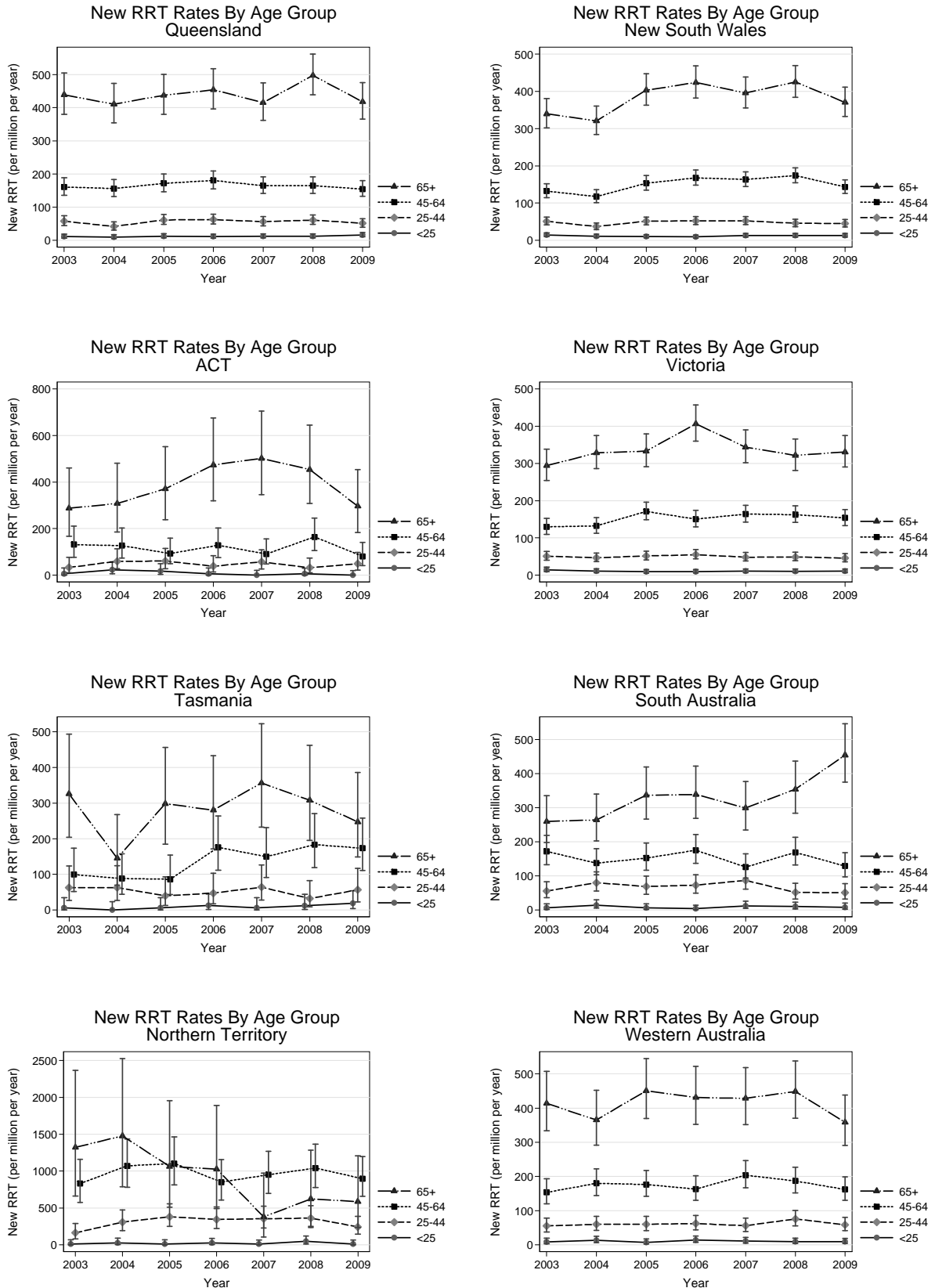


Figure 2.7

Incidence rates (95% confidence intervals) for new RRT patients by State by age group.
Note the Y axis scales for each State are different.





LATE REFERRAL

There were 21% (22% in 2008) of all new patients in Australia and 17% (23% in 2008) of new patients in New Zealand who were referred “late” to nephrological care, i.e. less than three months before first treatment (Figure 2.8).

Among the States/Territories, the lowest rate was 7% in the Northern Territory ranging to 27% in Victoria. Variation of this rate with age is shown in Figure 2.9, trends over time in Figure 2.10 and by racial origin in Figure 2.11. Late referral rates were particularly high in the ≥ 85 year age group.

Figure 2.8

Late Referral of New Patients 2009										
Number of Patients (% Patients)										
Primary Renal Disease	QLD	NSW	ACT	VIC	TAS	SA	NT	WA	AUST	NZ
YES										
Analgesic	1 (1%)	2 (1%)	0 (0%)	2 (1%)	0 (0%)	0 (0%)	0 (0%)	1 (2%)	6 (1%)	0 (0%)
Diabetes-I Insulin	3 (3%)	4 (3%)	0 (0%)	5 (3%)	0 (0%)	1 (4%)	0 (0%)	0 (0%)	13 (3%)	0 (0%)
Diabetes-II Insulin Req	15 (14%)	23 (15%)	0 (0%)	17 (12%)	2 (18%)	1 (4%)	0 (0%)	5 (10%)	63 (13%)	24 (26%)
Diabetes-II Non-Insulin	14 (13%)	13 (8%)	0 (0%)	18 (12%)	0 (0%)	2 (9%)	3 (60%)	14 (29%)	64 (13%)	18 (19%)
Glomerulonephritis	19 (18%)	44 (29%)	1 (25%)	43 (29%)	2 (18%)	4 (17%)	2 (40%)	12 (25%)	127 (26%)	24 (26%)
Hypertension	18 (17%)	25 (16%)	2 (50%)	13 (9%)	1 (9%)	5 (22%)	0 (0%)	9 (19%)	73 (15%)	9 (10%)
Miscellaneous	23 (22%)	31 (20%)	0 (0%)	30 (20%)	4 (36%)	6 (26%)	0 (0%)	5 (10%)	99 (20%)	15 (16%)
Polycystic	2 (2%)	2 (1%)	0 (0%)	2 (1%)	1 (9%)	2 (9%)	0 (0%)	1 (2%)	10 (2%)	0 (0%)
Reflux	1 (1%)	3 (2%)	0 (0%)	6 (4%)	1 (9%)	1 (4%)	0 (0%)	1 (2%)	13 (3%)	0 (0%)
Uncertain	10 (9%)	7 (5%)	1 (25%)	11 (7%)	0 (0%)	1 (4%)	0 (0%)	0 (0%)	30 (6%)	4 (4%)
Sub Total	106 (22%)	154 (21%)	4 (10%)	147 (27%)	11 (21%)	23 (12%)	5 (7%)	48 (21%)	498 (21%)	94 (17%)
No										
Analgesic	12 (3%)	15 (3%)	0 (0%)	1 (0%)	0 (0%)	2 (1%)	0 (0%)	0 (0%)	30 (2%)	2 (0%)
Diabetes-I insulin	13 (3%)	15 (3%)	0 (0%)	18 (5%)	0 (0%)	6 (3%)	1 (1%)	6 (3%)	59 (3%)	13 (3%)
Diabetes-II Insulin Req	60 (16%)	113 (20%)	7 (19%)	62 (16%)	5 (12%)	28 (16%)	8 (12%)	28 (15%)	311 (17%)	135 (29%)
Diabetes-II Non-insulin	51 (13%)	67 (12%)	4 (11%)	46 (12%)	4 (10%)	16 (9%)	27 (40%)	37 (20%)	252 (14%)	77 (16%)
Glomerulonephritis	74 (19%)	129 (23%)	11 (30%)	97 (25%)	12 (29%)	45 (26%)	15 (22%)	55 (30%)	438 (24%)	98 (21%)
Hypertension	58 (15%)	89 (16%)	4 (11%)	44 (11%)	5 (12%)	29 (17%)	4 (6%)	25 (14%)	258 (14%)	52 (11%)
Miscellaneous	34 (9%)	56 (10%)	3 (8%)	37 (9%)	2 (5%)	11 (6%)	1 (1%)	12 (7%)	156 (8%)	38 (8%)
Polycystic	35 (9%)	46 (8%)	6 (16%)	36 (9%)	6 (14%)	14 (8%)	2 (3%)	13 (7%)	158 (9%)	34 (7%)
Reflux	15 (4%)	18 (3%)	2 (5%)	17 (4%)	1 (2%)	4 (2%)	0 (0%)	8 (4%)	65 (4%)	9 (2%)
Uncertain	28 (7%)	15 (3%)	0 (0%)	36 (9%)	7 (17%)	17 (10%)	9 (13%)	0 (0%)	112 (6%)	15 (3%)
Sub Total	380 (78%)	563 (79%)	37 (90%)	394 (73%)	42 (79%)	172 (88%)	67 (93%)	184 (79%)	1839 (79%)	473 (83%)
Total (100%)	486	717	41	541	53	195	72	232	2337	567

Figure 2.9

Late Referral - All Modes of Treatment Including Pre-emptive Transplants
New Patients 1-Jan-2005 to 31-Dec-2009

Country	Age Groups						Total
	0-19	20-44	45-64	65-74	75-84	>=85	
Australia							
Yes	59 (26%)	492 (26%)	941 (21%)	634 (22%)	512 (22%)	87 (33%)	2725 (23%)
No	168 (74%)	1388 (74%)	3474 (79%)	2270 (78%)	1766 (78%)	179 (67%)	9245 (77%)
Total (100%)	227	1880	4415	2904	2278	266	11,970
New Zealand							
Yes	33 (44%)	109 (26%)	234 (20%)	89 (15%)	42 (19%)	2 (11%)	509 (20%)
No	42 (56%)	306 (74%)	945 (80%)	488 (85%)	184 (81%)	17 (89%)	1982 (80%)
Total (100%)	75	415	1179	577	226	19	2491

Figure 2.10

Late Referral - All Modes of Treatment
Including Pre-emptive Transplants 2005 to 2009

Country	Years				
	2005	2006	2007	2008	2009
Australia					
Yes	553 (24%)	557 (23%)	562 (24%)	555 (22%)	498 (21%)
No	1738 (76%)	1873 (77%)	1816 (76%)	1979 (78%)	1839 (79%)
Total (100%)	2291	2430	2378	2534	2337
New Zealand					
Yes	97 (21%)	110 (22%)	96 (21%)	112 (23%)	94 (17%)
No	364 (79%)	390 (78%)	370 (79%)	385 (77%)	473 (83%)
Total (100%)	461	500	466	497	567

Figure 2.11

Late Referral - All Modes of Treatment
Including Pre-emptive Transplants
By Race 2005 to 2009

Country	Race					
	Asian	Aboriginal/ TSI	Caucasoid	Maori	Pacific People	Other
Australia						
Yes	222 (23%)	328 (29%)	2050 (22%)	23 (28%)	57 (29%)	45 (28%)
No	739 (77%)	784 (71%)	7408 (78%)	59 (72%)	140 (71%)	115 (72%)
Total (100%)	961	1112	9458	82	197	160
New Zealand						
Yes	25 (15%)	-	193 (17%)	205 (26%)	86 (21%)	0 (0%)
No	140 (85%)	-	929 (83%)	575 (74%)	329 (79%)	9 (100%)
Total (100%)	165	-	1122	780	415	9



CO-MORBID CONDITIONS

Co-morbid conditions at entry to RRT are shown in Figures 2.12 - 2.18. The proportion of people with Type II diabetes as a primary renal disease continues to be more common in New Zealand.

(See Appendix II and III for further analyses of co-morbid conditions)

Figure 2.12

Co-morbid Conditions at Entry to Program 2009									
Number of Patients (% Patients)									
Country		Chronic Lung Disease	Coronary Artery Disease	Peripheral Vascular Disease	Cerebro-Vascular Disease	Smoking		Diabetes (Including Diabetic Nephropathy)	
Australia n=2337	Yes	271 (12%)	802 (34%)	444 (19%)	265 (11%)	Current	249 (11%)	Type 1	82 (4%)
	Suspected	94 (4%)	153 (7%)	172 (7%)	69 (3%)	Former	958 (41%)	T2 Ins Req	458 (20%)
	No	1972 (84%)	1382 (59%)	1721 (74%)	2003 (86%)	Never	1130 (48%)	T2 Non ins	516 (22%)
								No	1281 (55%)
New Zealand n=567	Yes	69 (12%)	148 (26%)	67 (12%)	58 (10%)	Current	81 (14%)	Type 1	14 (2%)
	Suspected	36 (6%)	61 (11%)	34 (6%)	10 (2%)	Former	215 (38%)	T2 Ins Req	167 (29%)
	No	462 (81%)	358 (63%)	466 (82%)	499 (88%)	Never	271 (48%)	T2 Non ins	118 (21%)
								No	268 (47%)

Figure 2.13

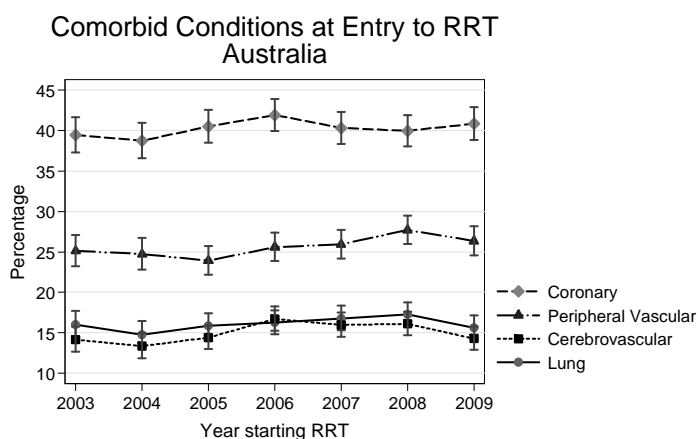


Figure 2.14

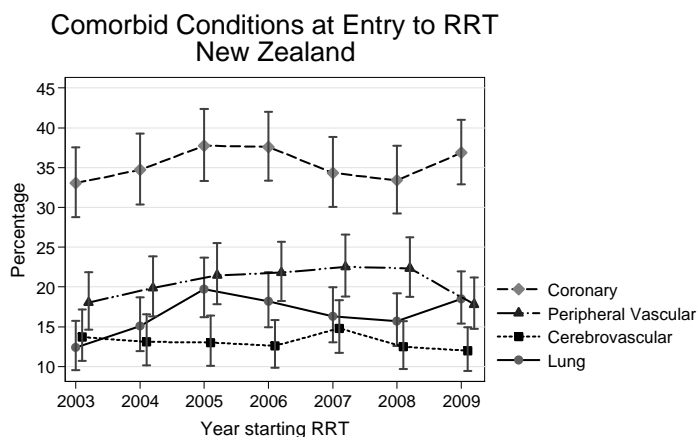


Figure 2.15

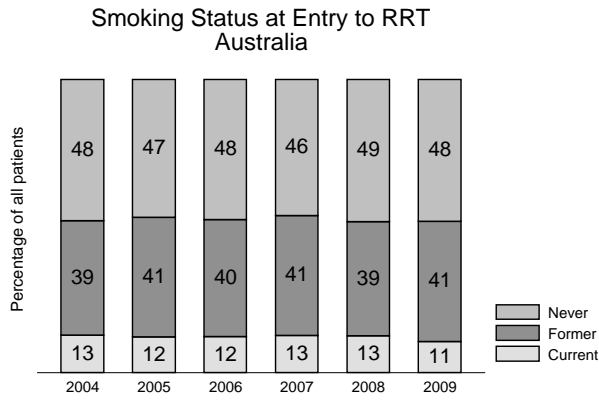


Figure 2.16

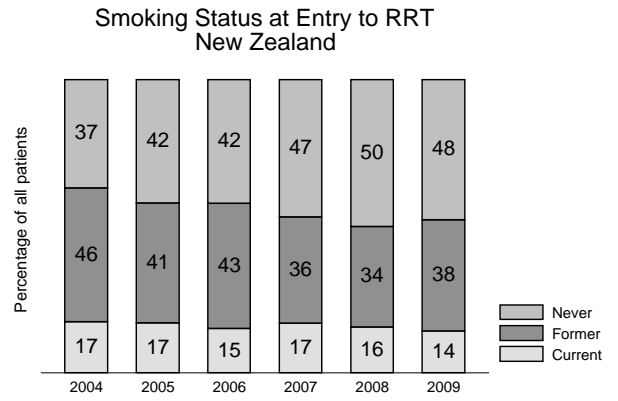


Figure 2.17

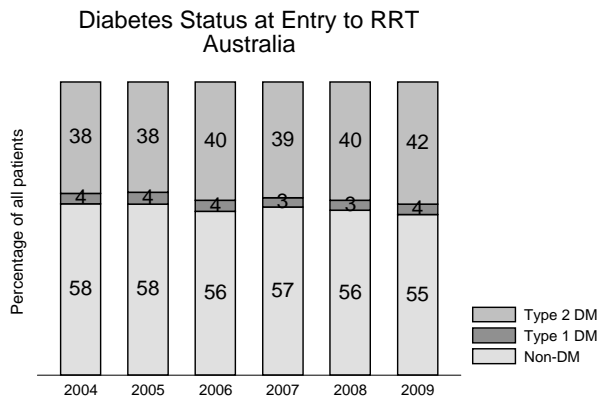
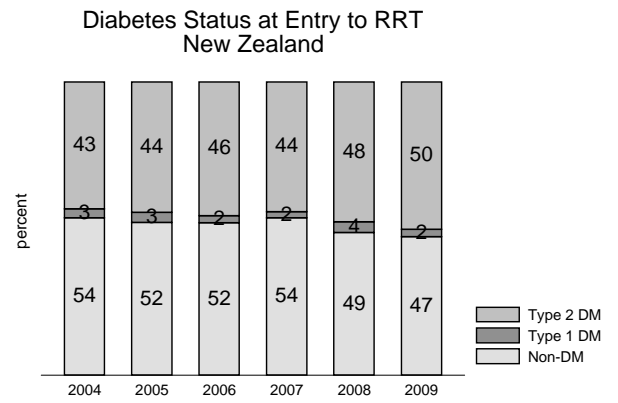


Figure 2.18





PRIMARY RENAL DISEASE OF NEW PATIENTS

AUSTRALIA

Diabetic nephropathy (33% of all new patients), continues for the sixth year in succession as the most common cause of primary renal disease (Figure 2.19).

Diabetes Type II (non-insulin and insulin requiring) represented 91% of diabetic nephropathy, the same as for 2008 and 2007.

Glomerulonephritis (24%) was the next most common cause of ESRD, followed by hypertension (14%), polycystic kidney disease (7%), reflux nephropathy (3%) and analgesic nephropathy (2%). The number of **analgesic nephropathy** patients decreased 28% (36 patients) from 2008 (50 patients) and was the lowest reported since 1969.

IgA + mesangioproliferative GN (24% of all GN) was the most common histologically proven form of glomerulonephritis (32% of biopsy proven glomerulonephritis), followed by **focal sclerosing GN, including primary and secondary focal sclerosing** (15%) (Figure 2.20).

Amongst the **miscellaneous diseases** causing end stage renal failure, there were 38 cases of multiple myeloma, 19 interstitial nephritis, 18 lithium toxicity, 16 cortical necrosis, 15 congenital renal hypoplasia and dysplasia, 14 haemolytic uraemic syndrome, 12 amyloid and ten due to calcineurin inhibitor nephrotoxicity (Figure 2.21).

A **renal biopsy** based diagnosis was reported in 31% of cases: glomerulonephritis 76%, hypertension 20%, reflux 17%, diabetes (types I and II) 13%, analgesic nephropathy 8% and polycystic kidney disease 4% (Figure 2.22).

NEW ZEALAND

Diabetic nephropathy (47%) was the most common cause of ESRD followed by glomerulonephritis (22%) and hypertension (11%).

Diabetes Type II (non-insulin and insulin requiring) represented 95% of diabetic nephropathy.

Focal sclerosing GN, including primary and secondary focal sclerosing (22%) and **IgA + mesangioproliferative GN** (13%) represented 32% of biopsy proven glomerulonephritis (Figure 2.20).

Biopsy rates (26%) were lower than those in Australia (31%) in 2009.

Figure 2.19

Causes of ESRD 2006 - 2009 Number of Patients (% Patients)				
Disease	2006	2007	2008	2009
Australia				
Glomerulonephritis	551 (23%)	581 (24%)	570 (22%)	565 (24%)
Analgesic Nephropathy	54 (2%)	44 (2%)	50 (2%)	36 (2%)
Polycystic Kidney	152 (6%)	145 (6%)	162 (6%)	168 (7%)
Reflux Nephropathy	93 (4%)	69 (3%)	75 (3%)	78 (3%)
Hypertension	359 (15%)	380 (16%)	365 (14%)	331 (14%)
Diabetic Nephropathy	796 (33%)	745 (31%)	859 (34%)	762 (33%)
Miscellaneous	294 (12%)	261 (11%)	262 (10%)	255 (11%)
Uncertain Diagnosis	131 (5%)	153 (6%)	191 (8%)	142 (6%)
Total (100%)	2430	2378	2534	2337
New Zealand				
Glomerulonephritis	107 (21%)	115 (25%)	101 (20%)	122 (22%)
Analgesic Nephropathy	1 (<1%)	3 (1%)	2 (<1%)	2 (<1%)
Polycystic Kidney	36 (7%)	29 (6%)	23 (5%)	34 (6%)
Reflux Nephropathy	14 (3%)	10 (2%)	14 (3%)	9 (2%)
Hypertension	58 (12%)	50 (11%)	46 (9%)	61 (11%)
Diabetic Nephropathy	211 (42%)	191 (41%)	227 (46%)	267 (47%)
Miscellaneous	39 (8%)	53 (11%)	62 (12%)	53 (9%)
Uncertain Diagnosis	34 (7%)	15 (3%)	22 (4%)	19 (3%)
Total (100%)	500	466	497	567

Figure 2.20

Types of Glomerulonephritis 1-Jan-2009 to 31-Dec-2009 Number (% of all GN)		
	Australia	New Zealand
Presumed GN - No Biopsy performed	116 (21%)	30 (25%)
Focal Sclerosing	33 (6%)	8 (7%)
Primary Focal Sclerosing	45 (8%)	16 (13%)
Secondary Focal Sclerosing	5 (1%)	3 (2%)
MCGN - Type I	11 (2%)	6 (5%)
MCGN - Type II	6 (1%)	1 (1%)
Membranous GN	25 (4%)	6 (5%)
Rapidly Progressive GN	15 (3%)	3 (2%)
Mesangioproliferative IgA +	137 (24%)	16 (13%)
Mesangioproliferative IgA -	8 (1%)	2 (2%)
Mesangioproliferative No I.F. Studies	6 (1%)	2 (2%)
Focal and Segmental Proliferative GN	30 (5%)	4 (3%)
Advanced GN (end-stage type)	20 (4%)	3 (2%)
Goodpasture's Syndrome	8 (1%)	2 (2%)
Systemic Lupus	31 (5%)	5 (4%)
Henoch-Schonlein Purpura	1 (<1%)	3 (2%)
Wegener's Granulomatosis	15 (3%)	-
Microscopic Polyarteritis	18 (3%)	3 (2%)
Scleroderma	8 (1%)	2 (2%)
GN Other	6 (1%)	1 (1%)
Familial GN (including Alports)	18 (3%)	3 (2%)
Anti GBM (no haemoptysis)	2 (<1%)	3 (2%)
GN (with systemic disease)	1 (<1%)	-
Total	565	122

Figure 2.21

Miscellaneous Causes of ESRD 1-Jan-2009 to 31-Dec-2009

Renal Disease	Aust (255)	NZ (53)	Renal Disease	Aust (255)	NZ (53)
Interstitial Nephritis	19	9	Cortical Necrosis	16	1
Lithium Toxicity	18	4	Haemolytic Uraemic Syndrome	14	1
Calcineurin Inhibitor Toxicity	10	2	Chronic Haemolysis	1	-
Loss of a Single Kidney	5	1	Obstructive Nephropathy	26	4
Lead Nephropathy	3	-	Ureteric Obstructive Nephropathy	7	2
Pyelonephritis	2	-	Bladder Neck Obstruction	4	-
Sarcoidosis	2	-	Neuropathic Bladder	3	1
Acute Myeloid-Graft vs Host Disease	1	-	Posterior Urethral Valves	2	1
Acute Tubular Necrosis	1	1	Spina Bifida	-	2
Cystinosis	1	-	Lower Urinary Tract Abnormalities (Congenital Abnormalities)	1	-
Contrast Induced Nephropathy	1	-	Pelvi-Ureteric Junction Obstruction	1	-
Familial Hyperuricaemic Nephropathy	-	1	Congenital Renal Hypoplasia and Dysplasia	15	3
Gout	1	-	(L) Atrophic-(R) Pyelonephritis	1	-
HIV Nephropathy	1	-	(L) Renal Artery Stenosis-(R) Tuberculosis	-	1
Hyperfiltration Nephropathy	-	1	Renal Coloboma Syndrome	1	-
Nephrocalcinosis	-	1	Multiple Myeloma	38	7
Post Partum Nephropathy	1	-	Amyloid	12	2
Sjogren's Syndrome	1	-	Light Chain Nephropathy (Benign)	2	-
Streptomycin Toxicity	1	-	Renal Cell Carcinoma	10	-
Trauma-Motor Vehicle Accident	1	-	Transitional Cell Carcinoma	5	-
Tuberous Sclerosis	1	-	Radiation Nephropathy	2	-
Congestive Cardiac Failure	3	-	Carboplatin Nephrotoxicity	-	1
Multiorgan Failure	3	-	Chemotherapy-(L) Renal Fibrosis	1	-
Hepato-Renal Syndrome	2	-	Cysplatin Induced Nephrotoxicity	-	1
Ischaemic Cardiomyopathy	1	-	Wilm's Tumour	1	-
Secondary Congenital Heart Disease	1	-			
Septic Arthritis	1	-			
Calculi	7	4			
Medullary Cystic	4	-			
Juvenile Nephronophthisis	-	1			
Multicystic Kidneys	-	1			

Renal biopsy rates vary widely with different types of disease (Figure 2.23). This year in Australia, 31% of patients were biopsied compared to 28% the previous year. Among patients with glomerulonephritis as a primary renal disease, the number biopsied rose from 72% in 2008 to 76% this year. (Figure 2.24). Biopsy rates in New Zealand are lower, particularly for diabetic nephropathy (Figure 2.25).

Figure 2.22

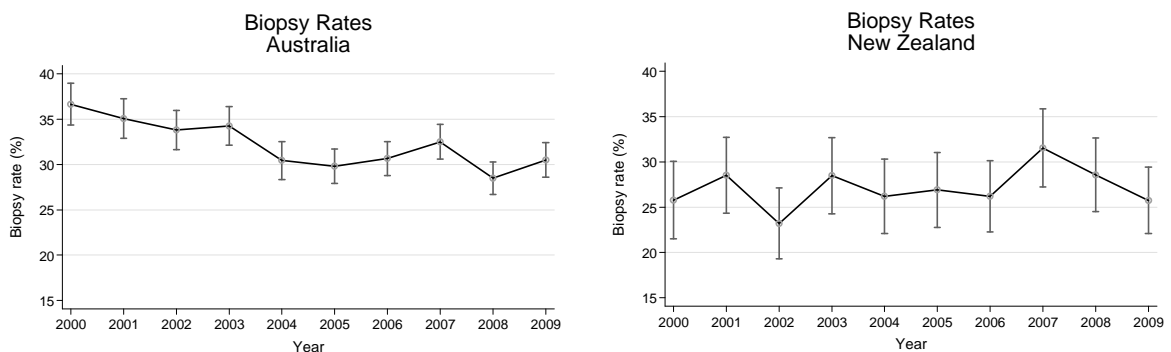




Figure 2.23

Biopsy of New Patients 2009

Biopsy	Primary Renal Disease	Qld	NSW	ACT	Vic	Tas	SA	NT	WA	Aust	NZ
Yes	Analgesic	-	3	-	-	-	-	-	-	3	-
	Diabetes-I Insulin Dependent	5	6	-	1	-	3	-	-	15	-
	Diabetes-II Insulin Requiring	11	12	2	13	3	4	-	-	45	17
	Diabetes-II Non-Insulin	5	8	1	9	3	4	2	6	38	9
	Glomerulonephritis	74	140	10	112	11	41	6	35	429	90
	Hypertension	17	19	-	20	2	6	1	2	67	9
	Miscellaneous	23	31	2	19	5	4	-	4	88	20
	Polycystic	3	1	-	2	-	-	-	-	6	-
	Reflux	2	4	-	5	1	-	-	1	13	-
	Uncertain	4	-	-	2	1	2	-	-	9	1
	Sub Total	144	224	15	183	26	64	9	48	713	146
No	Analgesic	13	14	-	3	-	2	-	1	33	2
	Diabetes-I Insulin Dependent	11	13	-	22	-	4	1	6	57	13
	Diabetes-II Insulin Requiring	64	124	5	66	4	25	8	33	329	142
	Diabetes-II Non-insulin	60	72	3	55	1	14	28	45	278	86
	Glomerulonephritis	19	33	2	28	3	8	11	32	136	32
	Hypertension	59	95	6	37	4	28	3	32	264	52
	Miscellaneous	34	56	1	48	1	13	1	13	167	33
	Polycystic	34	47	6	36	7	16	2	14	162	34
	Reflux	14	17	2	18	1	5	-	8	65	9
	Uncertain	34	22	1	45	6	16	9	-	133	18
	Sub Total	342	493	26	358	27	131	63	184	1624	421
	Total	486	717	41	541	53	195	72	232	2337	567

Fifteen per cent of all patients with diabetic nephropathy in Australia (1105/7426) and 8% (184/2414 in New Zealand) have had a biopsy proven diagnosis since this data was first collected by the Registry from 1st April, 1997

Figure 2.24

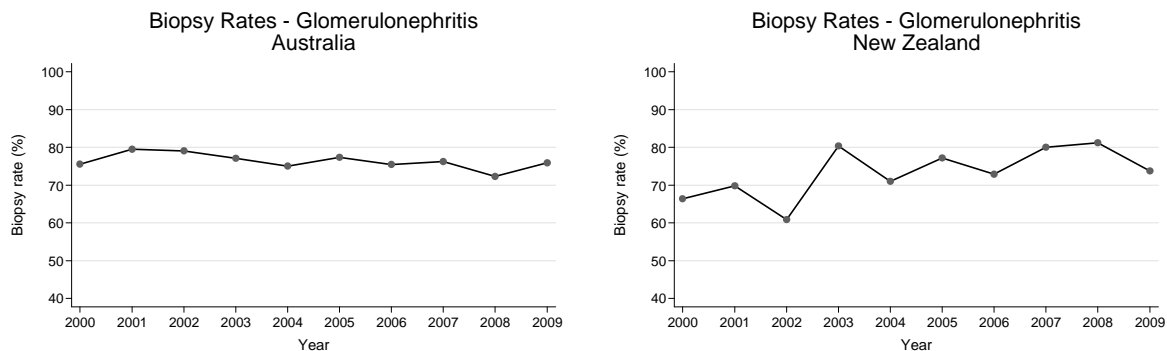


Figure 2.25

