CHAPTER 10

PAEDIATRIC

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Introduction

This year the Paediatric Report provides brief summary data, but a more comprehensive scientific paper on the outcomes for children with end-stage renal disease over the past 30 years is planned and will be a special chapter in next year's report.

Figure 10.1

**Age of Patients at First Treatment
By Treatment on That Day
First Treatment 1995 to 2000**

Country	Treatment	Age Groups				
		00-<05	05-<10	10-<15	15-<20	Total
Australia	Haemodialysis	3	9	14	74	**100**
	Peritoneal Dialysis	41	31	24	23	**119**
	Transplant	10	8	17	14	**49**
	Total	**54**	**48**	**55**	**111**	**268**
New Zealand	Haemodialysis	0	0	1	14	**15**
	Peritoneal Dialysis	8	10	10	15	**43**
	Transplant	0	4	4	1	**9**
	Total	**8**	**14**	**15**	**30**	**67**

Incidence of End Stage Renal Disease by Mode of Treatment (1995-2000)

Figure 10.1 shows the number of children and adolescents (up to 20 years of age) who have commenced treatment for ESRD from 1995 to 2000 (incident cases).

Overall the numbers of children treated for ESRD was very similar across the 0-4, 5-9 and 10-14 age groups, with double the number in the adolescent and young adult age group (15-19 years).

As expected, excluding transplantation (which is dependent upon donor availability), there was a linear trend in the mode of ESRD treatment with the age of the child so that younger children were primarily treated with peritoneal dialysis and older children and, in particular adolescents and young adults, were treated with haemodialysis (χ^2 trend 1df = 77.09, $p < 0.001$, for both countries combined).

Concerning pre-emptive renal transplantation, this occurred in 17% of children. There was significant variation in the proportion of children pre-emptively transplanted by age group (χ^2 3df = 12.39, $p = 0.006$), which varied from 10% (15-19 years) to 30% (10-14 years) but there was no evidence that there was a linear relationship between the age of the child and the likelihood for pre-emptive transplantation (χ^2trend 1df = 1.32, $p = 0.25$).

Figure 10.2

**Age of Patients on 31 December 2000
By Treatment on That Day**

Country	Treatment	Age Groups				
		00-<05	05-<10	10-<15	15-<20	Total
Australia	Haemodialysis	0	2	5	29	**36**
	Peritoneal Dialysis	9	10	6	19	**44**
	Transplant	11	39	56	87	**193**
	Total	**20**	**51**	**67**	**135**	**273**
New Zealand	Haemodialysis	1	0	1	9	**11**
	Peritoneal Dialysis	0	3	3	7	**13**
	Transplant	3	6	14	14	**37**
	Total	**4**	**9**	**18**	**30**	**61**

Prevalent End Stage Renal Disease at the end of 2000

Figure 10.2 shows the number of children and adolescents who received treatment for ESRD at the end of 2000 (prevalent cases).

Overall, in Australia there were 80 children and adolescents receiving dialysis and 193 who had received a renal transplant. In New Zealand there were 24 children and adolescents receiving dialysis and 37 who had received a renal transplant.

As expected, given the chronic nature of ESRD, the number of children increased with each age category increment. As for the choice of initial therapy, there was strong evidence that age was a strong predictor of mode of ongoing dialysis with increasing age associated with increased likelihood for haemodialysis use (χ^2trend 1df = 15.74, $p < 0.001$). For every age group 58% or more of children (range 58% to 82%) had received a renal transplant as treatment for their ESRD.

Figure 10.3

Primary Renal Disease and Age of Patients At First Treatment, By Treatment on That Day First Treatment 1995 to 2000

Country	Primary Renal Disease	Age Groups				
		00-<05	05-<10	10-<15	15-<20	Total
Australia	Glomerulonephritis	5	10	11	58	**84**
	Reflux	3	7	12	24	**46**
	Hypoplasia and Dysplasia	15	6	6	3	**30**
	Medullary Cystic	1	4	9	3	**17**
	Haemolytic Uraemic	9	2	1	3	**15**
	Posterior Urethral Valves	7	2	6	0	**15**
	Other	13	16	10	18	**57**
	Unknown	1	1	0	2	**4**
	Total	**54**	**48**	**55**	**111**	**268**
New Zealand	Glomerulonephritis	0	1	7	18	**26**
	Reflux	0	3	2	4	**9**
	Hypoplasia and Dysplasia	0	0	0	1	**1**
	Medullary Cystic	0	1	1	0	**2**
	Haemolytic Uraemic	0	0	1	0	**1**
	Posterior Urethral Valves	3	1	1	0	**5**
	Other	5	7	3	4	**19**
	Unknown	0	1	0	3	**4**
	Total	**8**	**14**	**15**	**30**	**67**

Cause of end stage renal disease (1995-2000)

Figure 10.3 shows the causes of primary renal disease causing ESRD amongst Australian and New Zealand children by age group for 1995-2000.

Glomerulonephritis remains the leading cause of end-stage renal failure overall amongst children and adolescents as a whole, but the congenital renal diseases are the major causes amongst young children.