

CHAPTER - 4

**QUALITY OF LIFE AND REHABILITATION
OUTCOMES OF PATIENTS ON DIALYSIS**

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SECTION 4.1: QoL INDEX SCORE

24673 dialysis patients who were alive at 31/12/2011 and entered dialysis between 1993 - 2012 were analysed. 22284 HD patients and 2389 PD patients both reported median QoL index score of 9 and 10 respectively (Table & Figure 4.1). Diabetics have a lower median QoL index score than non-diabetics (9 versus 10) (Table & Figure 4.2). Similarly, females did worse than males (9 versus 10) (Table & Figure 4.3). Lower median QoL index score was found in >60 years old age group (Table & Figure 4.4). Lower median QoL index score of 9 was seen in HD patients entering at 2009-2012 compared to 10 in those entering at 1993-2008 (Table & Figure 4.5). For PD patients, the median QoL index score remains consistently 10 for all entering at 1993-2012 (Table & Figure 4.6).

Table 4.1: Cumulative distribution of QoL-Index score in relation to dialysis modality, all dialysis patients 1993-2012

Dialysis modality	PD	HD
Number of patients	2389	22284
Centile		
0	0	0
0.05	5	5
0.1	6	6
0.25 (LQ)	8	7
0.5 (median)	10	9
0.75 (UQ)	10	10
0.9	10	10
0.95	10	10
1	10	10

Figure 4.1: Cumulative distribution of QoL-Index score in relation to dialysis modality, all dialysis patients 1993-2012

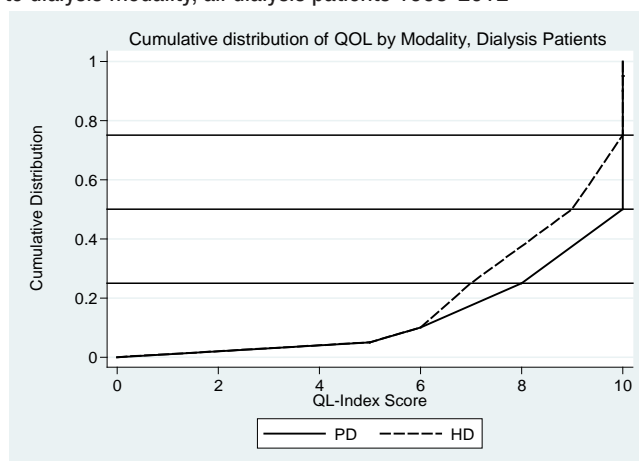


Table 4.2: Cumulative distribution of QoL-Index score in relation to DM, all dialysis patients 1993-2012

Diabetes mellitus	No	Yes
Number of patients	13705	10968
Centile		
0	0	0
0.05	5	4
0.1	6	5
0.25 (LQ)	8	7
0.5 (median)	10	9
0.75 (UQ)	10	10
0.9	10	10
0.95	10	10
1	10	10

Figure 4.2: Cumulative distribution of QoL-Index score in relation to DM, All Dialysis patients, 1993-2012

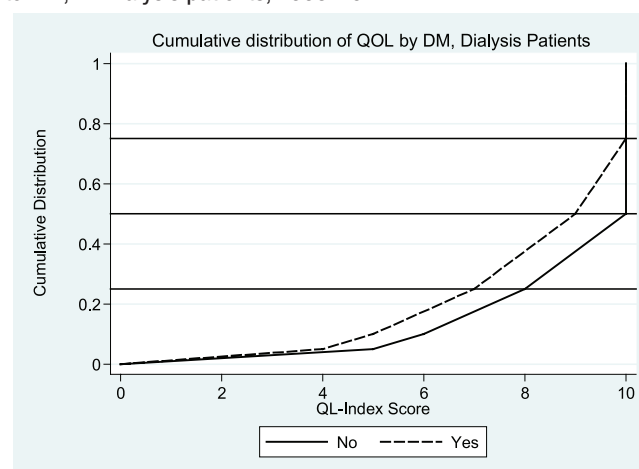


Table 4.3: Cumulative distribution of QoL-index score in relation to gender, all dialysis patients 1993-2012

Gender	Male	Female
Number of patients	13471	11202
Centile		
0	0	0
0.05	5	5
0.1	6	5
0.25 (LQ)	8	7
0.5 (median)	10	9
0.75 (UQ)	10	10
0.9	10	10
0.95	10	10
1	10	10

Figure 4.3: Cumulative distribution of QoL-Index score in relation to gender, all dialysis patients, 1993-2012

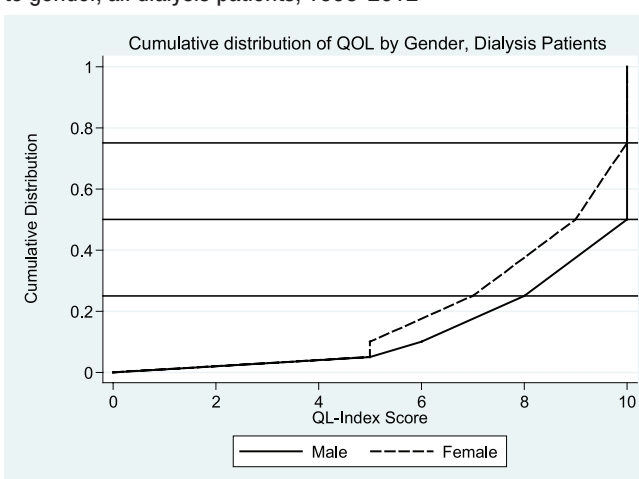
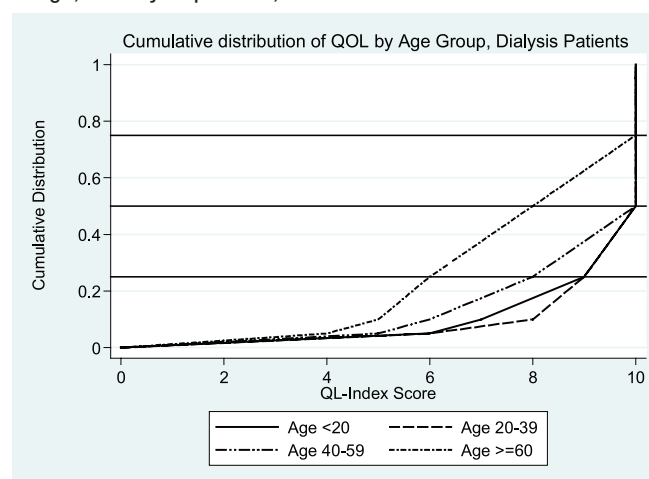


Table 4.4: Cumulative distribution of QoL-index score in relation to age, all dialysis patients 1993-2012

Age group (years)	<20	20-39	40-59	>=60
Number of patients	666	4661	11975	7371
Centile				
0	0	0	0	0
0.05	6	6	5	4
0.1	7	8	6	5
0.25 (LQ)	9	9	8	6
0.5 (median)	10	10	10	8
0.75 (UQ)	10	10	10	10
0.9	10	10	10	10
0.95	10	10	10	10
1	10	10	10	10

Figure 4.4: Cumulative distribution of QoL-Index score in relation to age, all dialysis patients, 1993-2012**Table 4.5:** Cumulative distribution of QoL-Index score in relation to year of entry, HD patients 1993-2012

Year of Entry	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Number of patients	46	55	97	112	177	210	269	314	402	506
Centile										
0	0	0	0	0	0	0	0	0	0	0
0.05	8	4	6	6	8	6	6	6	6	6
0.1	9	6	8	8	8	8	8	8	7	7
0.25 (LQ)	10	9	9	10	10	10	9	9	9	9
0.5 (median)	10	10	10	10	10	10	10	10	10	10
0.75 (UQ)	10	10	10	10	10	10	10	10	10	10
0.9	10	10	10	10	10	10	10	10	10	10
0.95	10	10	10	10	10	10	10	10	10	10
1	10	10	10	10	10	10	10	10	10	10

Year of Entry	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Number of patients	613	794	974	1338	1609	2085	2529	2991	3765	3398
Centile										
0	0	0	0	0	0	0	0	0	0	0
0.05	5	5	5	5	5	5	5	5	4	4
0.1	7	6	6	6	6	6	5	5	5	5
0.25 (LQ)	8	8	8	8	8	8	7	7	7	7
0.5 (median)	10	10	10	10	10	10	9	9	9	9
0.75 (UQ)	10	10	10	10	10	10	10	10	10	10
0.9	10	10	10	10	10	10	10	10	10	10
0.95	10	10	10	10	10	10	10	10	10	10
1	10	10	10	10	10	10	10	10	10	10

Figure 4.5: Cumulative distribution of QoL-Index score in relation to year of entry, HD patients 1993-2012

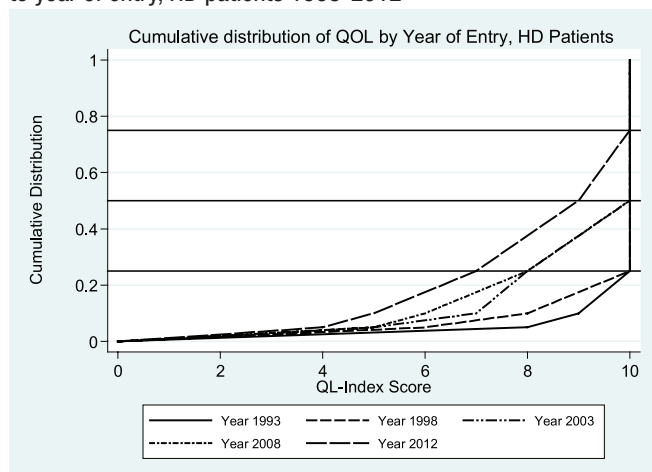


Figure 4.6: Cumulative distribution of QoL-Index score in relation to year of entry, PD patients 1993-2012

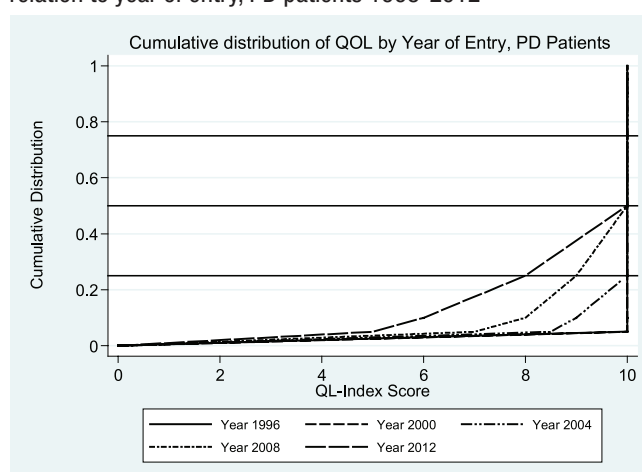


Table 4.6: Cumulative distribution of QoL-Index score in relation to year of entry, PD patients 1993-2012

Year of Entry	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Number of patients	0	0	1	3	5	4	1	4	15	19
Centile										
0			0	0	0	0	0	0	0	0
0.05			10	10	10	9	10	10	10	8
0.1			10	10	10	9	10	10	10	10
0.25 (LQ)			10	10	10	9.5	10	10	10	10
0.5 (median)			10	10	10	10	10	10	10	10
0.75 (UQ)			10	10	10	10	10	10	10	10
0.9			10	10	10	10	10	10	10	10
0.95			10	10	10	10	10	10	10	10
1			10	10	10	10	10	10	10	10

Year of Entry	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Number of patients	38	40	48	82	122	174	268	311	536	718
Centile										
0	0	0	0	0	0	0	0	0	0	0
0.05	9	8.5	6	7	7	7	5	5	5	5
0.1	10	9	8	8	8	8	6	6	6	6
0.25 (LQ)	10	10	10	10	10	9	8	8	8	8
0.5 (median)	10	10	10	10	10	10	10	10	10	10
0.75 (UQ)	10	10	10	10	10	10	10	10	10	10
0.9	10	10	10	10	10	10	10	10	10	10
0.95	10	10	10	10	10	10	10	10	10	10
1	10	10	10	10	10	10	10	10	10	10

SECTION 4.2: WORK RELATED REHABILITATION

Analysis was done on HD patients (n=11838) and PD patients (n=1145) who entered dialysis between 1993 and 2012. (Table 4.7) Only patients who are working for pay and those who are unable to work for pay due to health reasons are included. PD group has a lower proportion of patients on employment compared to HD group (PD 54% vs HD 62%).

Amongst HD patients, the proportion on employment was consistently above 70% in those who began dialysis as early as 1993. From 2006 onwards, employment fell steadily each year to 42% in 2012 (Table 4.8). This may be confounded by the healthier HD patients who survived longer and therefore spuriously increased the proportion on employment. The number of surviving PD patients who started PD before 2006 remained very small. From 2007 onwards, employment fell steadily each year to 44% in 2012 (Table 4.9).

Table 4.7: Work related rehabilitation in relation to modality, dialysis patients, 1993-2012

Modality	PD		HD	
	n	%	n	%
Number of patients	1145		11838	
Able to return for Full or Part time for pay*	624	54	7342	62
Unable to work for pay	521	46	4496	38

*analysis based on living patient only (alive as at 31/12/2012)

Table 4.8: Work related rehabilitation in relation to year of entry, HD patients 1993-2012

Year		1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Number of patients		41	52	87	99	149	172	221	247	302	383
Able to return for Full or Part time for pay*	n	31	41	66	77	107	133	173	187	230	300
	%	76	79	76	78	72	77	78	76	76	78
Unable to work for pay	n	10	11	21	22	42	39	48	60	72	83
	%	24	21	24	22	28	23	22	24	24	22

Year		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Number of patients		400	510	582	787	862	1146	1217	1443	1664	1474
Able to return for Full or Part time for pay*	n	289	384	420	543	590	734	746	821	850	620
	%	72	75	72	69	68	64	61	57	51	42
Unable to work for pay	n	111	126	162	244	272	412	471	622	814	854
	%	28	25	28	31	32	36	39	43	49	58

*analysis based on living patient only (alive as at 31/12/2012)

Table 4.9: Work related rehabilitation in relation to year of entry, PD patients 1993-2012

Year		1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Number of patients		0	0	0	3	4	1	1	2	11	10
Able to return for Full or Part time for pay*	n	0	0	0	1	3	1	0	1	6	8
	%	0	0	0	33	75	100	0	50	55	80
Unable to work for pay	n	0	0	0	2	1	0	1	1	5	2
	%	0	0	0	67	25	0	100	50	45	20

Year		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Number of patients		24	22	31	55	64	89	131	148	246	303
Able to return for Full or Part time for pay*	n	18	13	18	34	46	64	70	80	129	132
	%	75	59	58	62	72	72	53	54	52	44
Unable to work for pay	n	6	9	13	21	18	25	61	68	117	171
	%	25	41	42	38	28	28	47	46	48	56

*analysis based on living patient only (alive as at 31/12/2012)

SUMMARY:

Median QoL index scores are higher in PD than HD patients (score of 10 and 9 respectively). Diabetes Mellitus, female gender and older age group are factors associated with lower median QoL index scores. Higher employment rate amongst HD patients who started dialysis earlier may be confounded by these healthier individuals who survived longer.