

HAEMODIALYSIS
IN
NON-GOVERNMENTAL ORGANISATION (NGO)
CENTRES

Stock and Flow
Death on Haemodialysis and Transfer to PD
NGO Haemodialysis Centres
Haemodialysis Patient Characteristics
Survival Analysis
Work related rehabilitation and quality of life
Haemodialysis practices
Dyslipidaemia in HD patients
Treatment of Renal Bone Disease
Management of Blood Pressure
Management of Anaemia
Nutritional status
Prevalence of anti-HCV antibodies and HBsAg

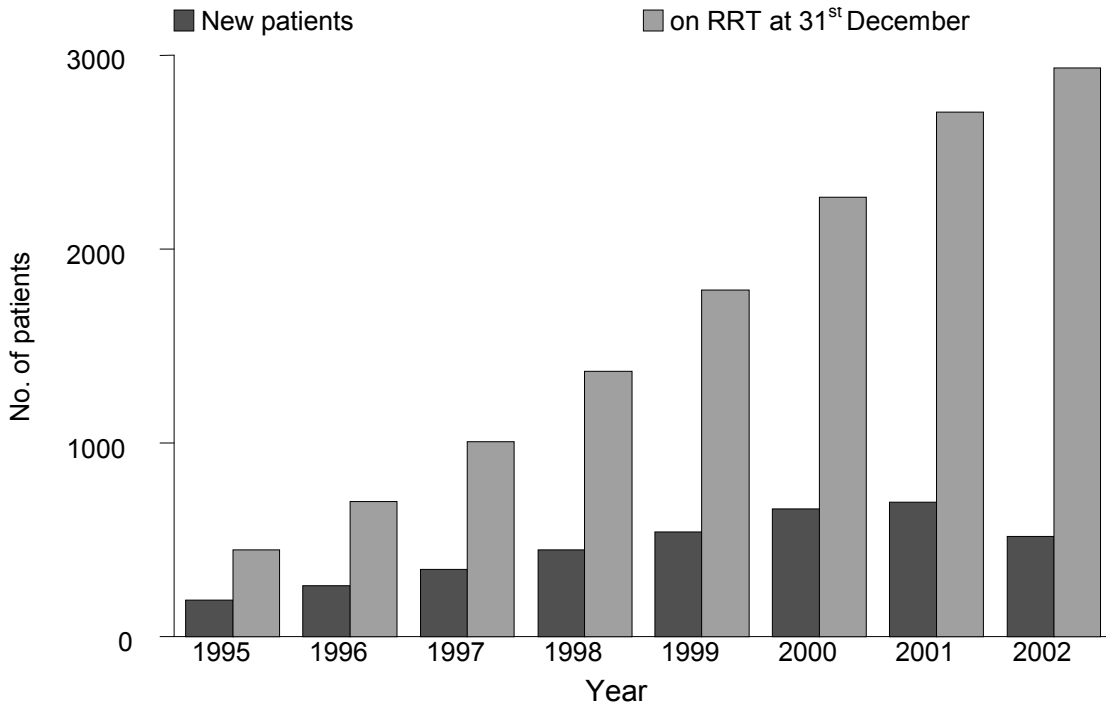
3.2 HAEMODIALYSIS IN NON-GOVERNMENTAL ORGANISATION (NGO) CENTRES

3.2.1 STOCK AND FLOW

Table 3.2.01: Stock and Flow HD patients, NGO Centres 1995 – 2002

Year	1995	1996	1997	1998	1999	2000	2001	2002
New patients	188	261	347	449	540	658	695	516
Died	15	20	44	86	117	155	220	233
Transferred to PD	0	0	0	1	4	8	10	8
Transplanted	2	5	8	13	15	28	35	46
Lost to Follow up	0	1	0	1	3	2	7	15
On HD at 31 st December	448	698	1007	1368	1788	2267	2705	2932

Figure 3.2.01: Stock and Flow HD patients, NGO Centres 1995 – 2002



3.2.3 DEATH ON HAEMODIALYSIS, NGO CENTRES

Table 3.2.04: Death Rate on HD and Transfer to PD, NGO Centres 1995 – 2002

Year	1995	1996	1997	1998	1999	2000	2001	2002
No. of patients at risk	448	573	853	1188	1578	2028	2486	2819
Deaths	15	20	44	86	117	155	220	233
Death rate %	3	3	5	7	7	8	9	8
Transfer to PD	0	0	0	1	4	8	10	8
Transfer to PD rate %	0	0	0	0	0	0	0	0
All Losses	15	20	44	87	121	163	230	241
All Losses rate %	3	3	5	7	8	8	9	9

Figure 3.2.04: Death Rate on HD, NGO Centres, 1995 – 2002

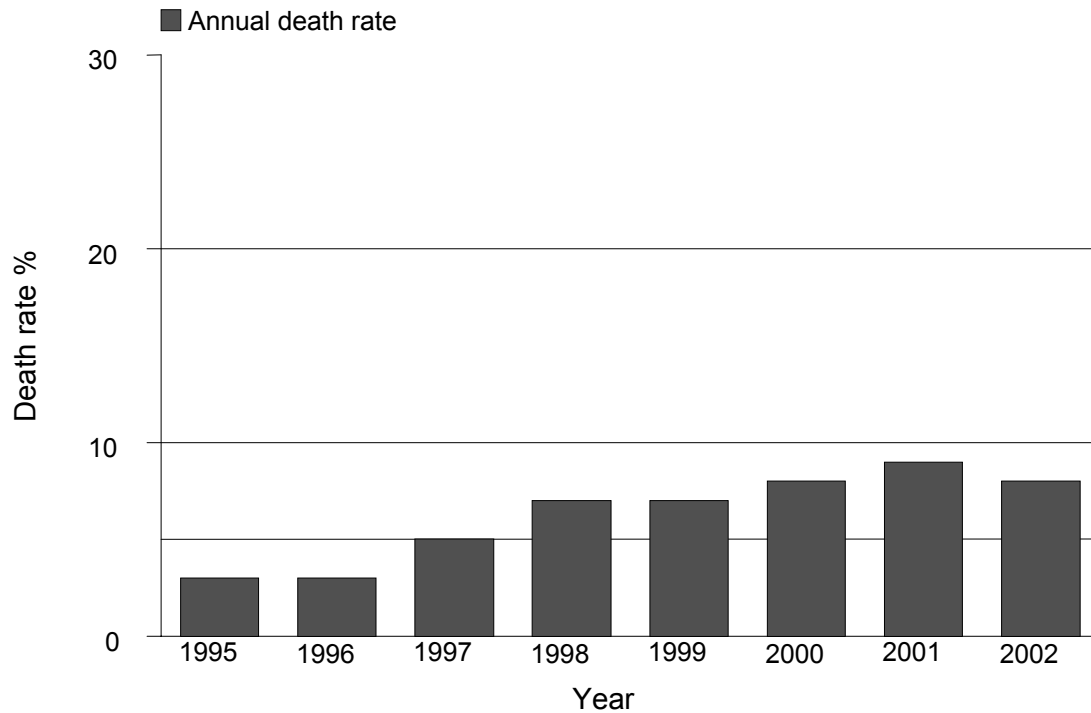


Table 3.2.05: Causes of Death, NGO Centres 1999 – 2002

Causes of death	1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%
Cardiovascular	38	32	58	37	61	28	95	41
Died at home	17	15	38	25	70	32	39	17
Sepsis	12	10	16	10	35	16	33	14
GIT bleed	3	3	1	1	3	1	6	3
Cancer	2	2	1	1	6	3	6	3
Liver disease	4	3	3	2	3	1	3	1
Others	32	27	37	24	29	13	37	16
Unknown	9	8	1	1	13	6	14	6
Total	117	100	155	100	220	100	233	100

3.2.4 NGO HAEMODIALYSIS CENTRES

Table 3.2.07: Centre Distribution of HD patients, NGO Centres, 2002

	Centre	No	percent
	No.on RRT at 31 st December	2932	100
1	AMD Rotary Dialysis Centre, Penang	9	0
2	Aixin-NKF Dialysis Centre	13	0
3	Amitabha Haemodialysis Centre	25	1
4	Bakti-NKF Dialysis Centre, Kelang	53	2
5	Batu Pahat Rotary Haemodialysis Centre	54	2
6	Berjaya NKF Dialysis Centre, Petaling Jaya	55	2
7	Buddhist Tzu Chi Dialysis Centre, Butterworth	8	0
8	Buddhist Tzu-Chi Dialysis Centre, Jitra	7	0
9	Buddhist Tzu-Chi Dialysis Centre, Penang	39	1
10	CHKMUS-MAA Medicare Charity Dialysis Centre	83	3
11	Charis-NKF Dialysis Centre, Cheras	83	3
12	Che Eng Khor Haemodialysis Centre	33	1
13	Fo Yi Haemodialysis Centre	30	1
14	Haemodialysis Association Klang	43	1
15	JB Lion MAA-Medicare Charity Dialysis	89	3
16	KAS-Rotary/NKF Dialysis Centre, Sarawak	26	1
17	KB Rotary-MAA Dialysis Centre	27	1
18	Kluang Rotary Haemodialysis Centre	33	1
19	Kuala Lumpur Lions Renal Centre	7	0
20	Lion Club of Alor Setar-NKF Dialysis Centre	32	1
21	MAA-Medicare Charity Dialysis Centre, Butterworth	52	2
22	MAA-Medicare Charity Dialysis Centre, Cheras	55	2
23	MAA-Medicare Charity Dialysis Centre, Kajang	48	2
24	MAA-Medicare Charity Dialysis Centre, Kuala Lumpur	100	3
25	MAA-Medicare Charity Dialysis Centre, Teluk Intan	50	2
26	MAA-Medicare Kidney Charity Fund, Kota Kinabalu	19	1
28	Mersing Rotary Haemodialysis Centre	5	0
28	Moral Uplifting-NKF Dialysis Centre, Ipoh	57	2
29	Muar Lions Renal Centre	97	3
30	NKF Dialysis Centre, Kuala Lumpur	54	2
31	Pahang Buddhist Association Haemodialysis Centre	25	1

32	Penang Caring Dialysis Centre	8	0
33	Persatuan Buah Pinggang Sabah	28	1
34	Persatuan Bulan Sabit Merah Cawangan Miri	58	2
35	Persatuan Dialisis Kurnia PJ	17	1
36	Persatuan Membaiki Akhlak Che Luan Khor	42	1
37	Pertubohan Hemodialisis Pasar Meru	4	0
38	Pertubuhan Bakti Fo En Bandar Kulim	25	1
39	Pertubuhan Hemodialisis Seberang Perai Selatan	31	1
40	Pontian Rotary Haemodialysis Centre	55	2
41	Province Wellesley Renal Medifund Dialysis Centre	15	1
42	Pusat Dialisis Klinik Waqaf An-nur	40	1
43	Pusat Dialisis Terengganu/NKF	32	1
44	Pusat Hemodialisis Darul Iltizam	45	2
45	Pusat Hemodialisis Manjung-NKF	48	2
46	Pusat Hemodialisis Mawar N. Sembilan, Bahau	25	1
47	Pusat Hemodialisis Mawar N. Sembilan, Lukut	26	1
48	Pusat Hemodialisis Mawar N. Sembilan, Seremban	126	4
49	Pusat Hemodialisis Rotary Kota Tinggi	22	1
50	Pusat Hemodialisis Rotary Kulai	76	3
51	Pusat Hemodialisis SJAM Bacang Melaka	116	4
52	Pusat Hemodialisis Yayasan Felda	60	2
53	Pusat Hemodialisis Zakat	15	1
54	Pusat Muhibah Hemodialisis Pesatuan Tionghua Segamat	77	3
55	Pusat Rawatan Dialisis Yayasan Pembangunan Keluarga Johor-NKF	23	1
56	Pusat Rawatan Islam, Kuala Lumpur	49	2
57	Pusat Rawatan Islam, Petaling Jaya	12	0
58	Rotary Club Damansara-NKF Dialysis Centre, Kepong	53	2
59	Rotary Club Tawau Tanjung Haemodialysis Centre	7	0
60	Rotary Haemodialysis Centre, Johor Bahru	35	1
61	SJAM-KPS Haemodialysis, Kelang	57	2
62	Sibu Kidney Foundation Haemodialysis Centre	43	1
63	Superkids Trinity-NKF Dialysis Centre, Alor Setar	22	1
64	The Nayang-NKF Dialysis Centre, Setapak	50	2
65	The Penang Community Haemodialysis Society	34	1
66	Woh Peng Cheang Seah Dialysis Centre	41	1

67	Yayasan Dialisis Pertubohan Pendidikan Akhlak-NKF, Taiping	29	1
68	Yayasan Hemodialisis Kebajikan Southern Melaka	59	2
69	Yayasan Kebajikan SSL Heamodialisis	116	4

3.2.5 HAEMODIALYSIS PATIENTS' CHARACTERISTICS, NGO CENTRES

Table 3.2.08: Age Distribution of Dialysis Patients, NGO Centres 1999 – 2002

Year	1999	2000	2001	2002
New Dialysis patients	540	658	695	516
1-14 years	0	0	0	0
15-24 years	1	2	3	2
25-34 years	12	9	8	6
35-44 years	17	16	16	13
45-54 years	29	31	27	25
55-64 years	27	26	28	32
≥65 years	13	16	19	21
Dialysing at 31 st December	1788	2267	2705	2932
1-14 years	0	0	0	0
15-24 years	4	3	3	3
25-34 years	14	13	12	11
35-44 years	22	21	21	20
45-54 years	28	29	29	28
55-64 years	23	23	23	24
≥65 years	10	11	12	13

Table 3.2.09: Patients' Characteristics, NGO Centres 1999 – 2002

Year	1999	2000	2001	2002
New Dialysis patients	540	658	695	516
Mean age ± sd	50 ± 13	52 ± 13	53 ± 14	54 ± 13
% Male	58	59	51	51
% Diabetic	41	47	47	54
% HbsAg+	4	5	4	3
% Anti-HCV+	6	3	4	2

3.2.6 SURVIVAL ANALYSIS, NGO CENTRES

Table 3.2.10: HD Patient Survival, NGO Centres 1997 – 2002

Year	1997			1998			1999		
Interval (months)	% survival	SE	No	% survival	SE	No	% survival	SE	No
6	95	1	344	97	1	444	97	1	539
12	92	1	325	93	1	421	94	1	513
24	83	2	292	86	2	378	87	1	468
36	77	2	269	78	2	335	78	2	411
48	73	2	246	71	2	293			
60	67	3	217						

Year	2000			2001			2002		
Interval (months)	% survival	SE	No	% survival	SE	No	% survival	SE	No
6	97	1	642	97	1	680	97	1	304
12	92	1	602	92	1	632			
24	83	1	515						

No. = number at risk SE = standard error

Figure 3.2.10: HD Patient Survival, NGO Centres 1998 –2002

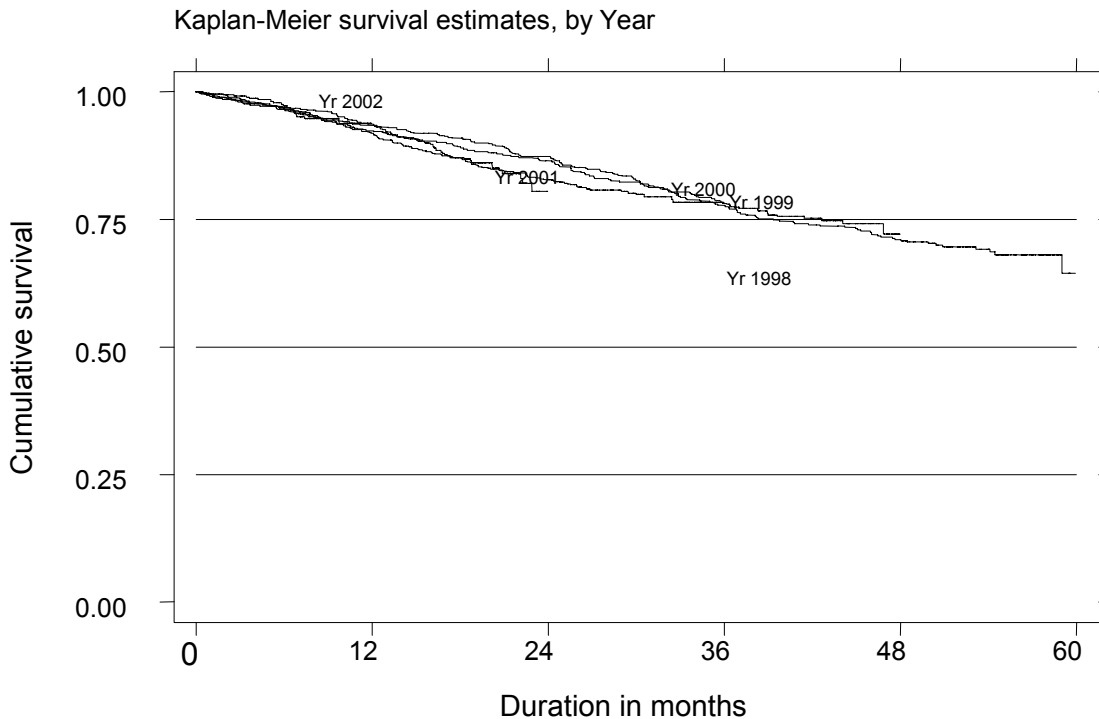


Table 3.2.11: HD Technique Survival, NGO Centres 1997-2002

Year	1997			1998			1999		
Interval (months)	% survival	SE	No	% survival	SE	No	% survival	SE	No
6	95	1	344	97	1	444	97	1	539
12	92	1	325	93	1	421	93	1	513
24	83	2	292	86	2	378	87	1	468
36	77	2	269	77	2	335	77	2	411
48	73	2	246	70	2	293			
60	67	3	217						

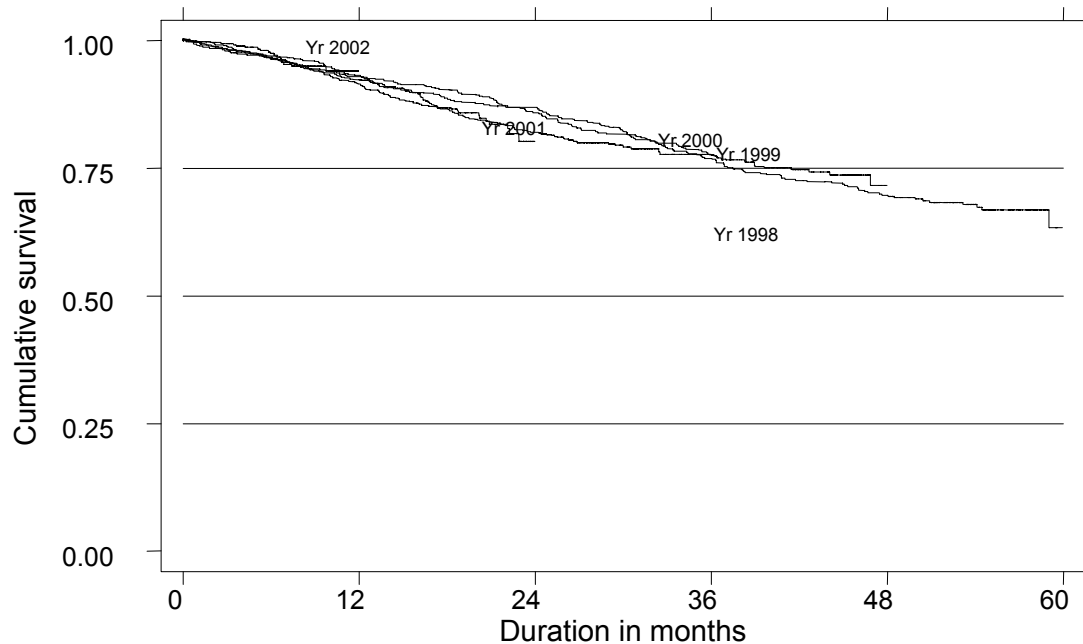
Year	2000			2001			2002		
Interval (months)	% survival	SE	No	% survival	SE	No	% survival	SE	No
6	96	1	642	97	1	680	97	1	304
12	91	1	602	92	1	632			
24	82	2	515						

No. = number at risk

SE = standard error

Figure 3.2.11 HD Technique Survival by year of entry, NGO centres 1998 –2002

Kaplan-Meier survival estimates, by Year



**3.2.7 WORK RELATED REHABILITATION AND QUALITY OF LIFE
ON HAEMODIALYSIS, NGO CENTRES**

Table 3.2.12: Work Related Rehabilitation on HD, NGO centres 1999-2002

REHABILITATION STATUS	1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%
Full time work for pay	128	19	211	18	199	12	229	12
Part time work for pay	106	16	179	15	261	16	314	16
Able to work but unable to get a job	28	4	64	5	88	5	79	4
Able to work but not yet due to dialysis schedule	35	5	28	2	58	4	83	4
Able but disinclined to work	22	3	34	3	27	2	28	1
Home maker	190	29	315	26	397	24	526	27
Full time student	1	0	1	0	2	0	4	0
Age<15 years	0	0	0	0	0	0	0	0
Retired	42	6	112	9	125	8	160	8
Age>65 years	33	5	124	10	218	13	252	13
Unable to work due to poor health	76	11	129	11	255	16	303	15
Total	661	100	1197	100	1630	100	1978	100

Table 3.2.13: Quality of Life on Haemodialysis, NGO Centres 1999 – 2002

QOL Index Summated Score	1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%
0 (Worst QOL)	0	0	0	0	3	0	4	0
1	0	0	2	0	3	0	5	0
2	2	0	4	0	4	0	9	0
3	4	1	20	2	27	2	24	1
4	15	2	27	2	54	3	43	2
5	25	4	39	3	91	6	91	5
6	30	5	75	6	117	7	122	6
7	56	9	87	7	144	9	156	8
8	75	11	101	8	151	9	199	10
9	70	11	138	11	232	14	214	11
10 (Best QOL)	380	58	722	59	801	49	1062	55
Total	657	100	1215	100	1627	100	1929	100

3.2.8 HAEMODIALYSIS PRACTICES IN NGO CENTRES

Table 3.2.14: Vascular Access on Haemodialysis, NGO Centres 1999 – 2002

Access types	1999		2000		2001		2002	
	No	%	No	%	No	%	No	%
Wrist AVF	610	84	1299	86	1569	83	1830	83
BCF*	92	13	176	12	275	15	309	14
Venous graft	2	0	3	0	8	0	7	0
Artificial graft	5	1	11	1	17	1	23	1
PERMCATH	3	0	2	0	4	0	8	0
Temporary CVC*	11	2	19	1	14	1	22	1
Total	723	100	1510	100	1887	100	2199	100

* BCF = Brachiocephalic fistula

* CVC = Central venous catheter

Table 3.2.15: Difficulties reported with Vascular Access, NGO Centres 1999 – 2002

Access difficulty	1999		2000		2001		2002	
	No	%	No	%	No	%	No	%
Difficulty with needle placement	23	3	42	3	71	4	56	3
Difficulty in obtaining desired blood flow rate	20	3	37	2	72	4	71	3
Other difficulty	12	2	8	1	14	1	17	1
No difficulty	672	92	1430	94	1734	92	2062	93
Total	727	100	1517	100	1891	100	2206	100

Table 3.2.16: Complications reported with Vascular Access, NGO Centres 1999 – 2002

Complication	1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%
Thrombosis	27	4	46	3	75	4	47	2
Bleed	3	0	5	0	19	1	26	1
Aneurysmal dilatation	18	2	41	3	34	2	40	2
Swollen limb	8	1	15	1	15	1	10	0
Access related infection, local/Systemic	3	0	9	1	5	0	5	0
Distal Limb ischaemia	0	0	14	1	13	1	4	0
Venous outflow obstruction	17	2	16	1	22	1	31	1
Carpal tunnel	1	0	5	0	11	1	5	0
Other	14	2	9	1	31	2	52	2
No complication	636	87	1361	89	1667	88	1986	90
Total	727	100	1521	100	1892	100	2206	100

Table 3.2.17: Blood Flow Rates in NGO HD Units 1999 – 2002

Blood flow rates	1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%
<150 ml/min	1	0	3	0	0	0	1	0
150-199 ml/min	13	2	33	2	27	1	23	1
200-249 ml/min	333	47	516	35	581	32	408	19
250-299 ml/min	293	42	762	52	951	52	1252	58
300-349 ml/min	59	8	141	10	239	13	347	16
> 350 ml/min	3	0	11	1	23	1	117	5
Total	702	100	1466	100	1821	100	2148	100

Table 3.2.18: Number of HD Sessions per week, NGO HD Units 1999 – 2002

HD sessions Per week	1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%
1	1	0	4	0	1	0	3	0
2	22	3	104	7	86	5	55	3
3	699	97	1391	92	1801	95	2134	97
4	1	0	5	0	3	0	5	0
Total	723	100	1512	100	1891	100	2198	100

Table 3.2.19: Duration of HD in NGO HD Units 1999 – 2002

Duration of HD per session	1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%
≤3 hours	1	0	2	0	2	0	4	0
3.5 hours	1	0	2	0	2	0	15	1
4 hours	715	99	1472	97	1876	99	2163	99
4.5 hours	2	0	23	2	7	0	8	0
5 hours	3	0	12	1	4	0	2	0
≥5 hours	0	0	2	0	0	0	0	0
Total	722	100	1513	100	1891	100	2192	100

Table 3.2.20: Dialyser membrane types in NGO HD Units 1999 – 2002

Dialyser membrane	1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%
Cellulosic	328	55	449	39	406	30	343	19
Cellulose acetate	161	27	193	17	269	20	513	29
Synthetic	108	18	514	44	670	50	936	52
Total	597	100	1156	100	1345	100	1792	100

Table 3.2.21: Dialyser Reuse Frequency in NGO HD Units 1999 – 2002

Dialyser reuse frequency	1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%
1*	7	1	43	3	76	4	102	5
2	2	0	4	0	7	0	9	0
3	47	7	74	5	61	3	98	5
4	30	4	66	5	95	5	104	5
5	101	15	162	12	158	9	168	8
6	394	59	576	41	462	26	467	22
7	3	0	3	0	15	1	34	2
8	40	6	196	14	470	26	515	25
9	6	1	37	3	48	3	38	2
10	30	4	144	10	141	8	259	12
11	0	0	0	0	2	0	4	0
12	11	2	50	4	72	4	70	3
≥13	0	0	47	3	172	10	216	10
Total	671	100	1402	100	1779	100	2084	100

1* is single use i.e. no reuse

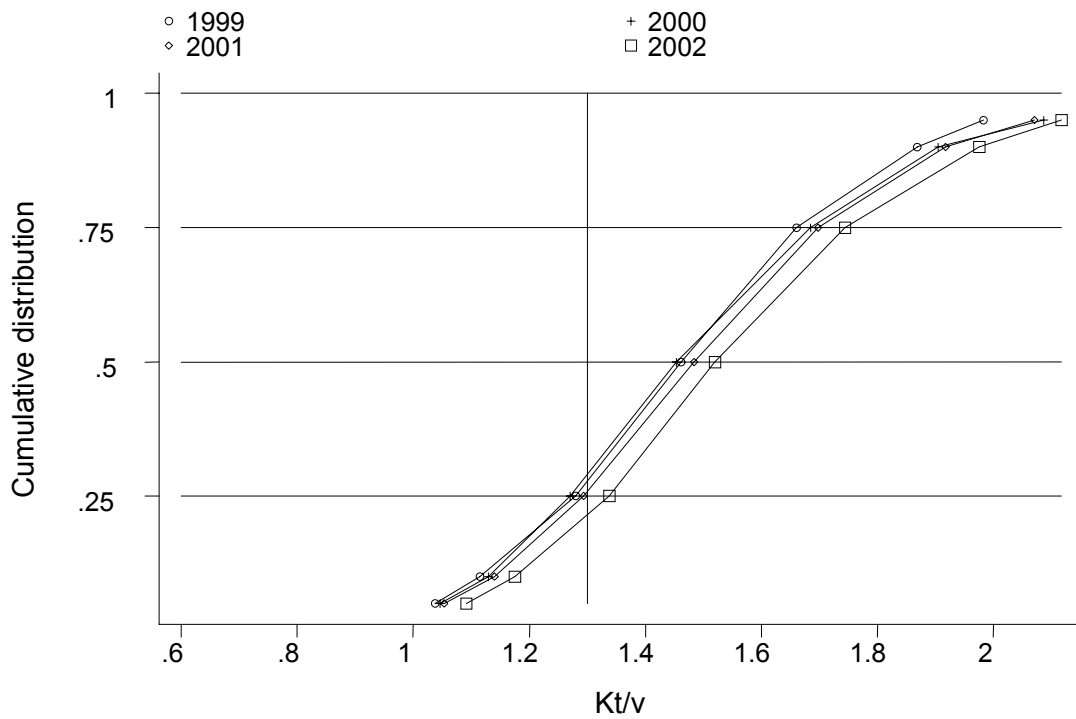
Table 3.2.22: Dialysate Buffer used in NGO HD Units 1999 – 2002

Dialysate buffer	1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%
Acetate	58	8	33	2	16	1	7	0
Bicarbonate	654	92	1471	98	1858	99	2174	100
Total	712	100	1504	100	1874	100	2181	100

Table 3.2.23: Distribution of Prescribed KT/V, NGO Centres 1999 – 2002

Year	No of subjects	No of observations	Median	LQ	UQ	% > 1.3
1999	668	6656	1.5	1.3	1.7	72
2000	1301	13078	1.5	1.3	1.7	71
2001	1710	17323	1.5	1.3	1.7	74
2002	2049	21264	1.5	1.3	1.7	79

Figure 3.2.23: Cumulative distribution of Prescribed KT/V by year



3.2.9 DYSLIPIDAEMIA IN HD PATIENTS, NGO CENTRES

Table 3.2.24: Distribution of serum Cholesterol Concentrations (mmol/L), HD patients, NGO Centres 1999 – 2002

Year	No of subjects	No of observations	Median	LQ	UQ	% Patients < 5.3 mmol/L
1999	171	285	5	4.1	5.7	68
2000	911	1446	5	4.2	5.9	65
2001	1487	2295	5	4.3	5.9	63
2002	1827	3027	4.9	4.2	5.7	67

Figure 3.2.24: Cumulative distribution of serum cholesterol concentration by year

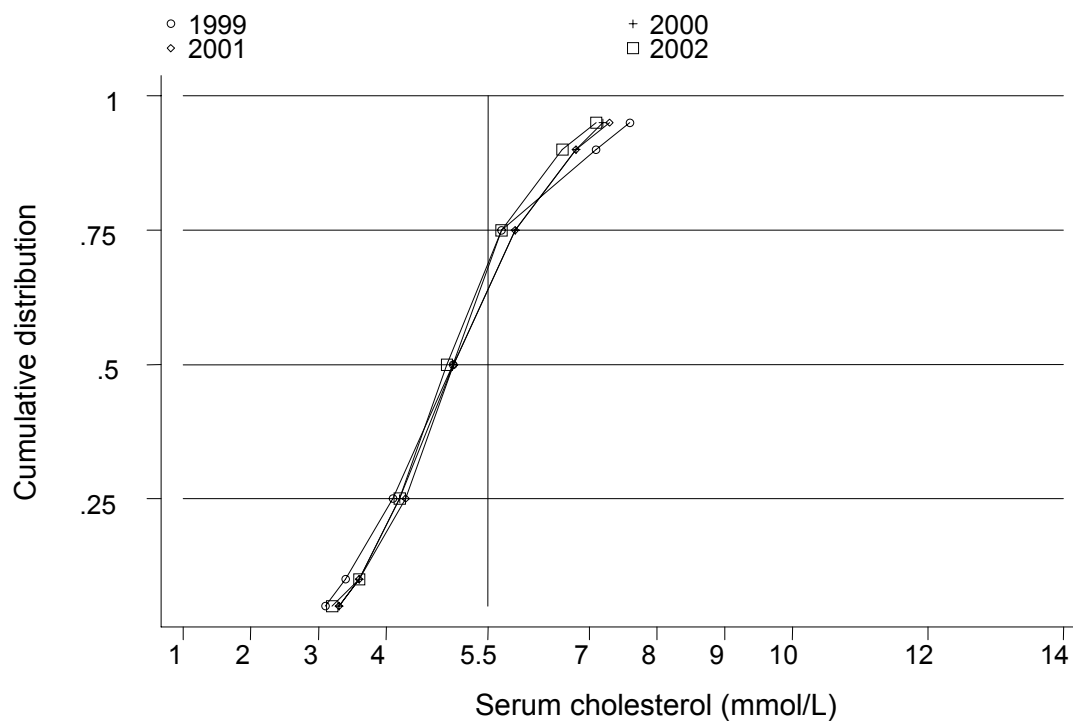


Table 3.2.25: Distribution of serum Triglyceride (mmol/L), HD patients, NGO Centres 1999 – 2002

Year	No of subjects	No of observations	Median	LQ	UQ	% Patients < 3.5 mmol/L
1999	148	243	1.8	1.3	2.6	86
2000	584	904	1.8	1.3	2.7	87
2001	987	1349	1.7	1.1	2.6	86
2002	1279	1948	1.7	1.2	2.6	85

Figure 3.2.25: Cumulative distribution of serum triglyceride concentration by year

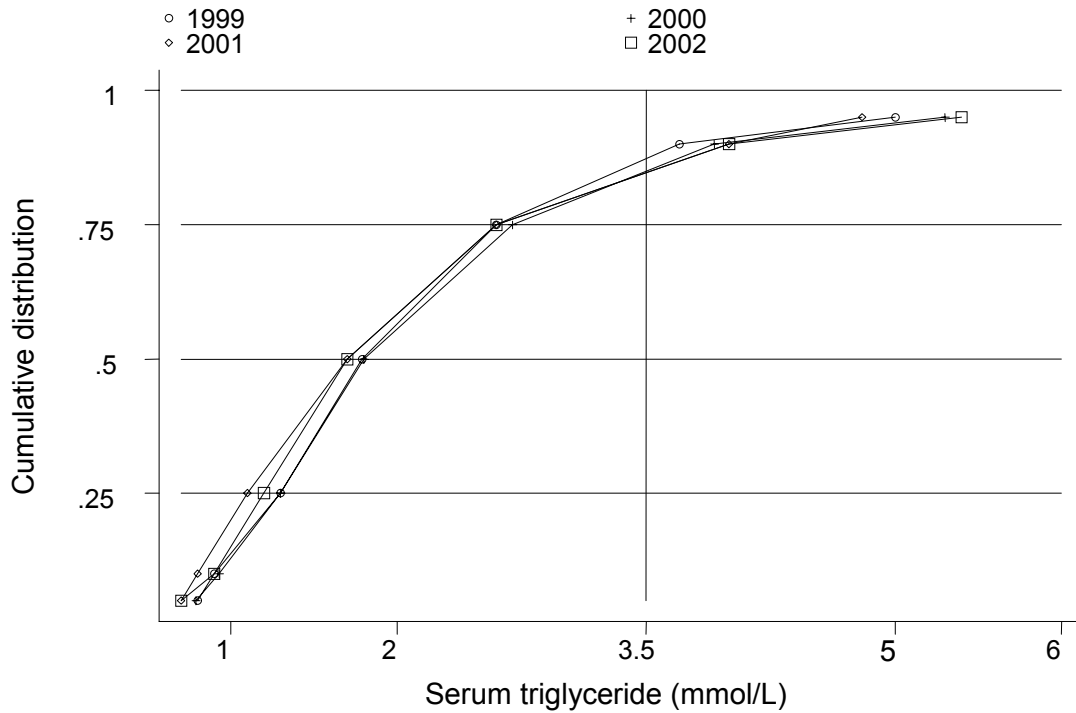


Table 3.2.26: Distribution of serum LDL (mmol/L), HD patients, NGO Centres 1999 – 2002

Year	No of subjects	No of observations	Median	LQ	UQ	% Patients <5 mmol/L
1999	39	50	3	2.5	3.7	92
2000	441	631	2.9	2.2	3.6	96
2001	793	1064	2.9	2.3	3.7	96
2002	1001	1468	2.9	2.3	3.6	96

Figure 3.2.26 : Cumulative distribution of serum LDL by year

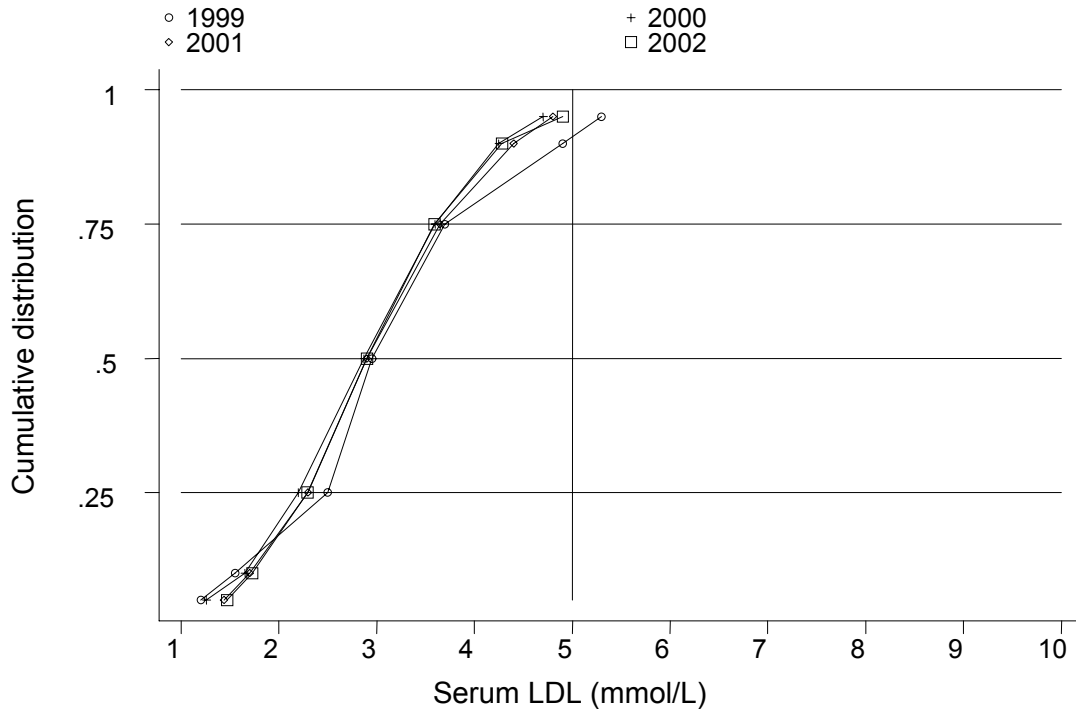
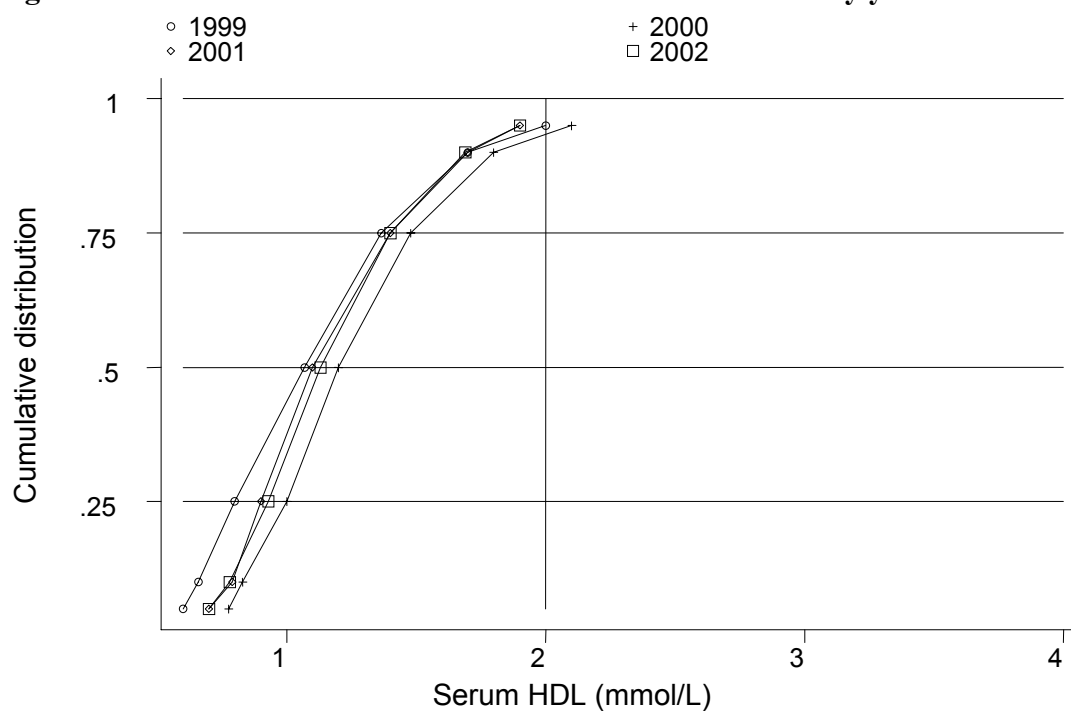


Table 3.2.27: Distribution of serum HDL (mmol/L), HD patients, NGO Centres 1999 – 2002

Year	No of subjects	No of observations	Median	LQ	UQ	% Patients < 2mmol/L
1999	41	52	1.1	0.8	1.4	94
2000	466	680	1.2	1	1.5	93
2001	819	1102	1.1	0.9	1.4	96
2002	1036	1544	1.1	0.9	1.4	96

Figure 3.2.27: Cumulative distribution of serum HDL by year



3.2.10 MANAGEMENT OF RENAL BONE DISEASE, NGO CENTRES

Table 3.2.28: Treatment for Renal Bone Disease, HD patients, NGO Centres 1999 – 2002

Year	No of subjects	% on CaCO ₃	% on Al(OH) ₃	% on Vitamin D
1999	728	90	6	29
2000	1531	91	4	23
2001	1905	95	1	21
2002	2223	93	1	22

Table 3.2.29: Distribution of serum Phosphate (mmol/l), HD patients, NGO Centres 1999– 2002

Year	No of subjects	No of observations	Median	LQ	UQ	% Patients < 1.6 mmol/L
1999	690	1927	1.9	1.5	2.3	30
2000	1380	3675	1.8	1.5	2.2	32
2001	1723	4642	1.8	1.4	2.2	36
2002	2107	5975	1.8	1.5	2.3	33

Figure 3.2.29: Cumulative distribution of serum Phosphate by year

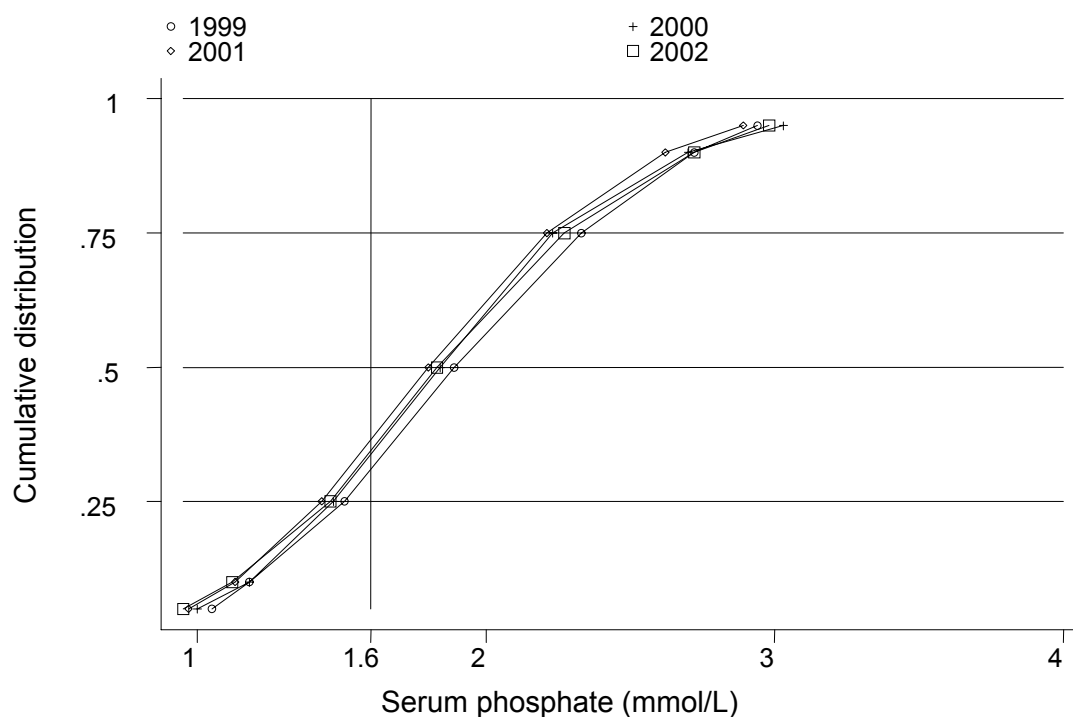


Table 3.2.30: Distribution of serum Calcium (mmol/l), HD patients, NGO Centres 1999 – 2002

Year	No of subjects	No of observations	Median	LQ	UQ	% Patients ≥ 2.2 & ≤ 2.6 mmol/L
1999	699	1948	2.3	2.2	2.5	56
2000	1377	3705	2.3	2.2	2.5	61
2001	1733	4709	2.3	2.2	2.5	61
2002	2114	6001	2.3	2.2	2.5	58

Figure 3.2.30: Cumulative distribution of serum Calcium by year

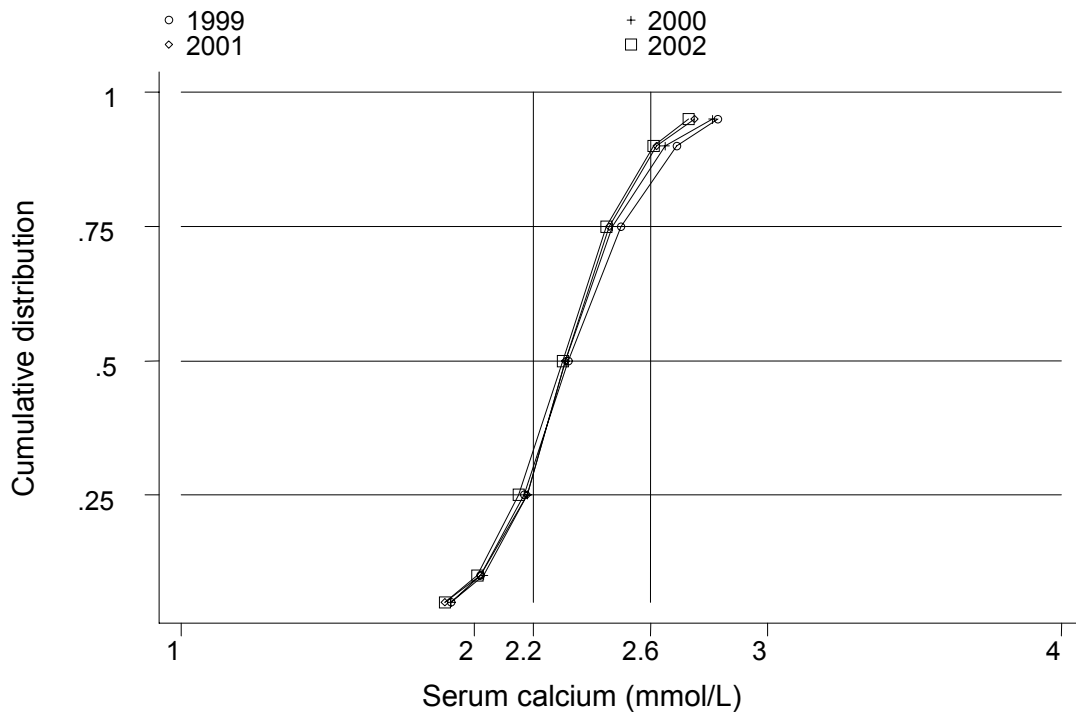
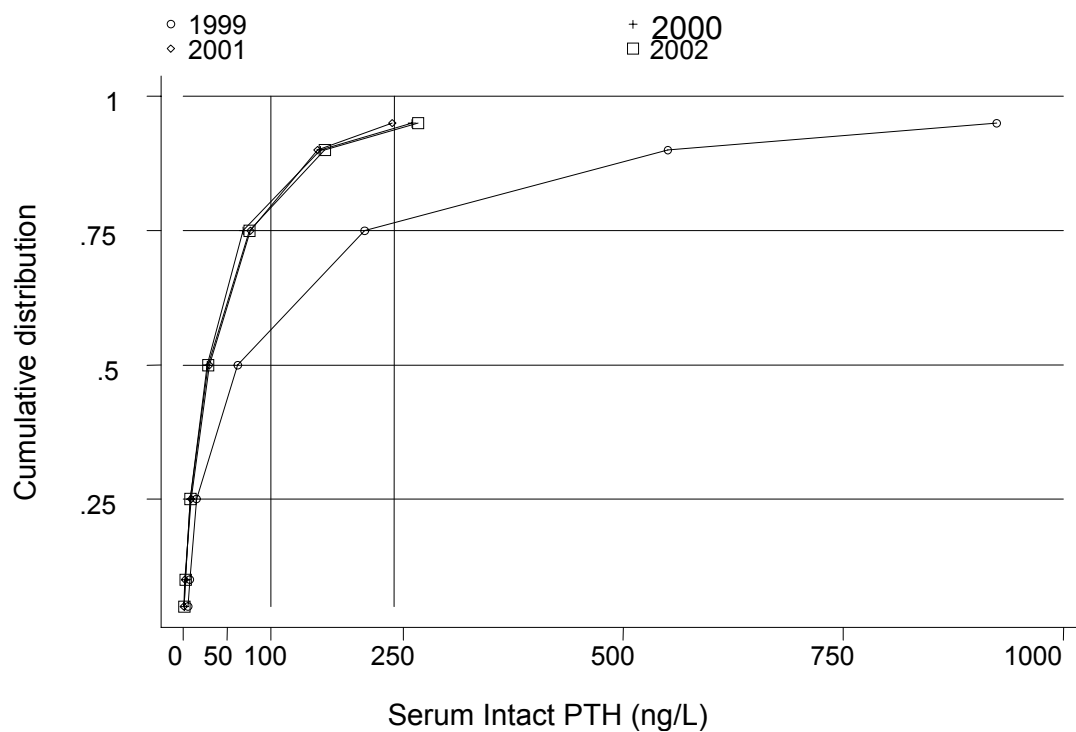


Table 3.2.31: Distribution of serum iPTH (ng/L), HD patients, NGO Centres 1999 – 2002

Year	No of subjects	No of observations	Median	LQ	UQ	% Patients ≥ 100 & ≤ 250 ng/L
1999	279	331	62.2	15.1	206	18
2000	627	846	27	8.3	68	11
2001	950	1269	29.8	9	76.9	13
2002	1275	1752	28.6	8.7	75.3	13

Figure 3.2.31: Cumulative distribution of serum iPTH by year



3.2.11 MANAGEMENT OF BLOOD PRESSURE, NGO CENTRES

Table 3.2.32: Treatment for hypertension, HD patients, NGO Centres 1999 – 2002

Year	No.	% on anti-hypertensives	% on 1 anti-hypertensives	% on 2 anti-hypertensives	% on 3 anti-hypertensives
1999	728	68	39	21	9
2000	1531	67	40	21	6
2001	1905	67	39	22	6
2002	2223	66	37	22	7

Table 3.2.33: Distribution of Systolic BP without anti-hypertensives, HD patients, NGO Centres 1999 – 2002

Year	No of subjects	No of observations	Median	LQ	UQ	% Patients < 160 mmHg
1999	229	2349	141	125	160	75
2000	490	4960	140	123	159	75
2001	628	6287	140	121	156	78
2002	747	7642	138.5	120	156	78

Figure 3.2.33: Cumulative distribution of Systolic BP without anti-hypertensives by year

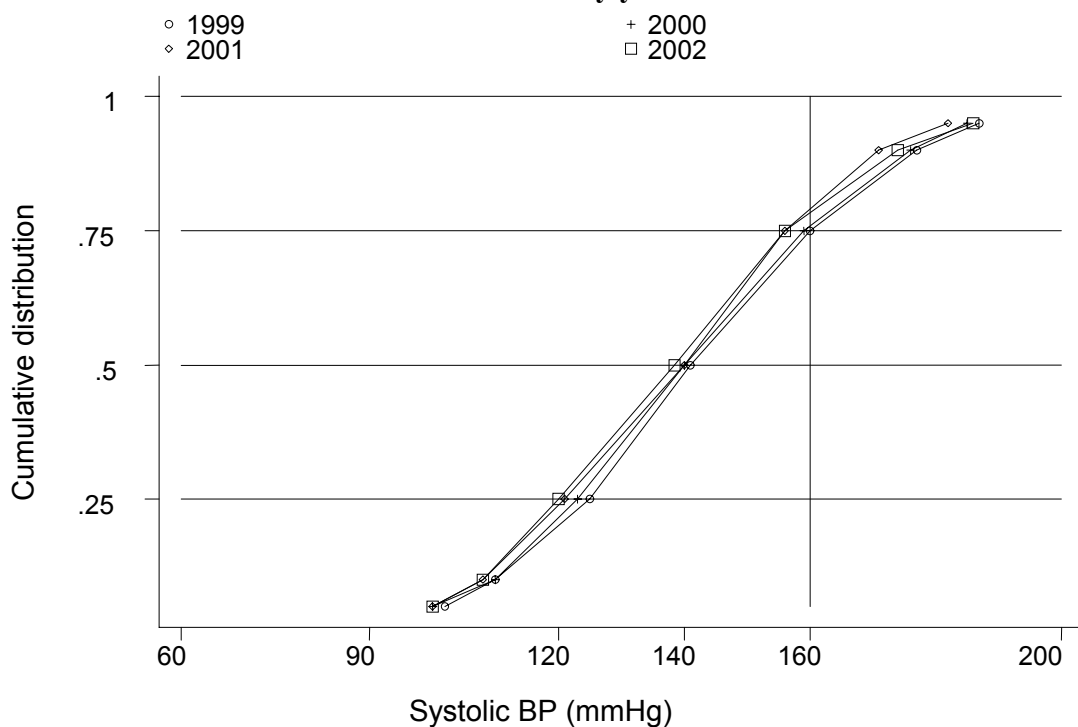


Table 3.2.34: Distribution of Diastolic BP without anti-hypertensives, HD patients, NGO Centres 1999 – 2002

Year	No. of subjects	No. of observations	Median	LQ	UQ	% Patients < 90 mmHg
1999	229	2346	80	70	90	72
2000	490	4961	80	70	88	77
2001	628	6289	80	70	87	80
2002	747	7642	78	70	85	81

Figure 3.2.34: Cumulative distribution of Diastolic BP without anti-hypertensives by year

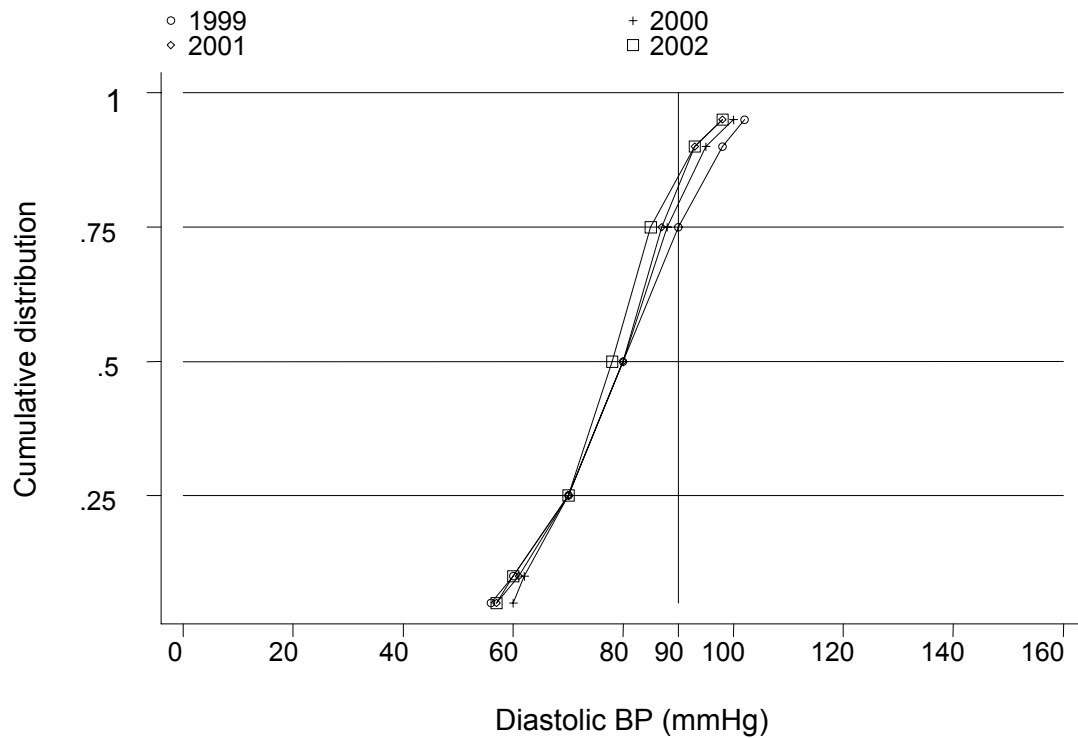


Table 3.2.35: Distribution of systolic BP on anti-hypertensives, HD patients, NGO Centres 1999 – 2002

Year	No of subjects	No of observations	Median	LQ	UQ	% Patients < 160 mmHg
1999	496	4861	159	141	178	50
2000	1000	9870	152	140	171	56
2001	1261	12644	154	140	172	55
2002	1463	15122	153	138	170	57

Figure 3.2.35: Cumulative distribution of systolic BP on anti-hypertensives by year

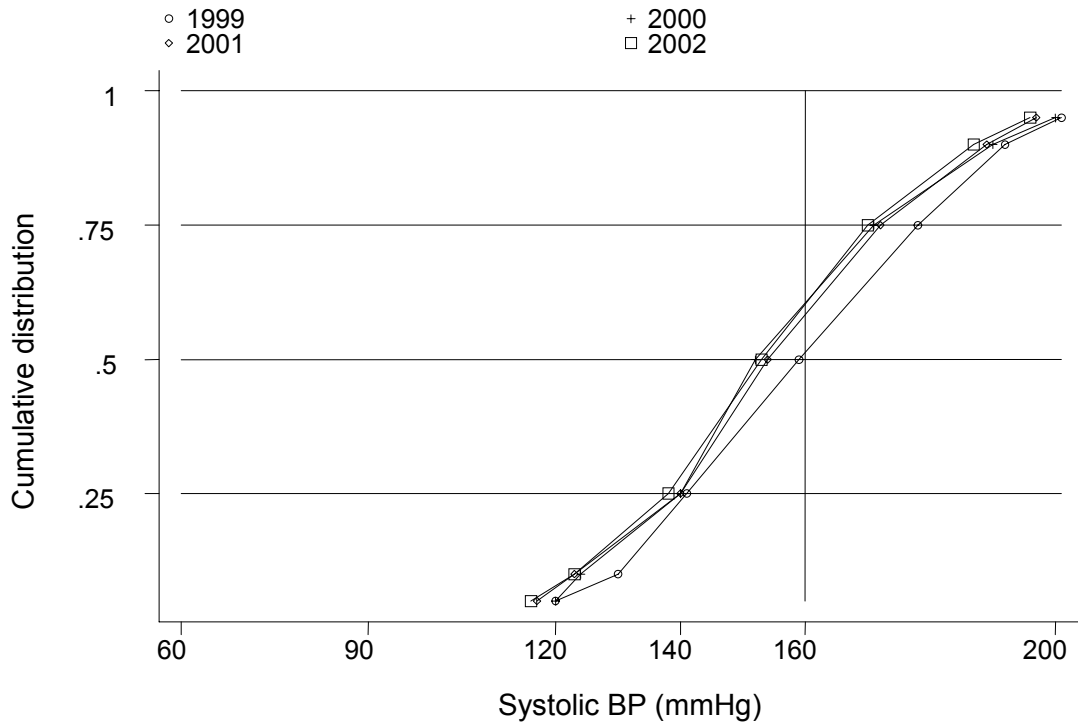
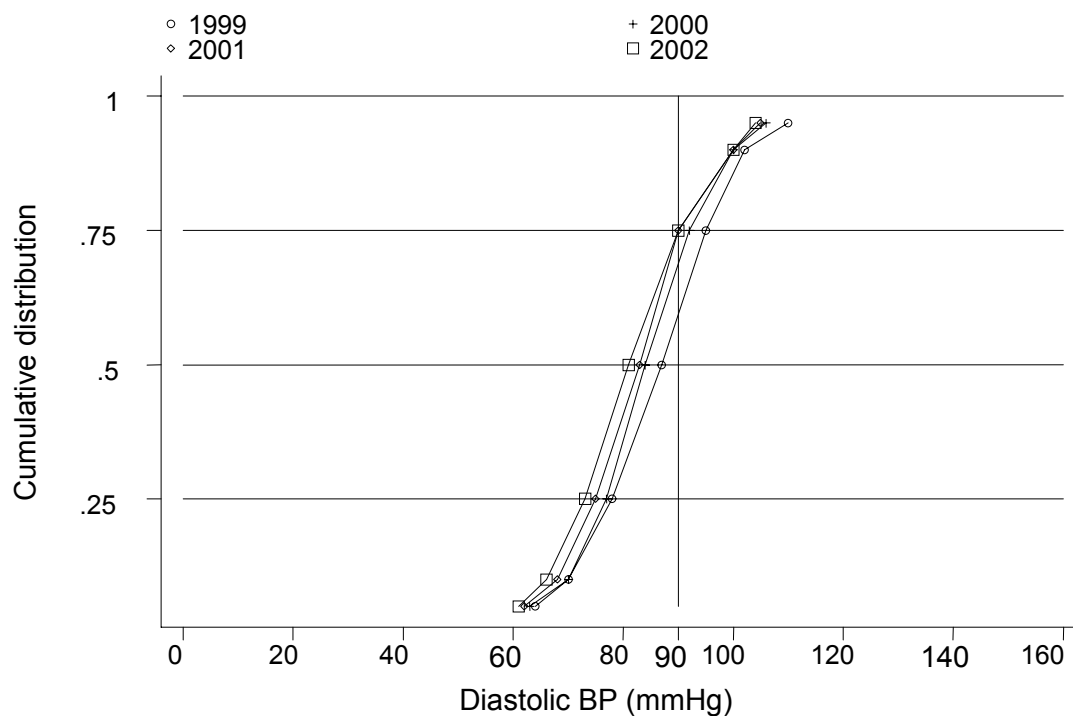


Table 3.2.36: Distribution of diastolic BP on anti-hypertensives, HD patients, NGO Centres 1999 – 2002

Year	No of subjects	No of observations	Median	LQ	UQ	% Patients < 90 mmHg
1999	496	4866	87	78	95	56
2000	999	9855	84	77	92	59
2001	1261	12639	83	75	90	63
2002	1461	15113	81	73	90	68

Figure 3.2.36: Cumulative distribution of diastolic BP on anti-hypertensives by year



3.2.12 TREATMENT OF ANAEMIA, NGO HD CENTRES

Table 3.2.37: Treatment for Anaemia, HD patients, NGO Centres 1999 – 2002

Year	No	% on rHuEpo	% received blood transfusion	% received oral iron	% received parenteral iron
1999	728	54	9	87	1
2000	1531	56	12	88	3
2001	1905	62	11	88	3
2002	2223	68	7	88	5

Table 3.2.38: Distribution of rHuEpo dose per week, HD patients, NGO Centres 1999 – 2002

Year	1999	2000	2001	2002
No. of patients	377	816	1153	1466
% on 2000 u/week	66	56	55	48
% on 2-4000 u/week	28	38	39	44
% on 4-6000 u/week	5	4	5	7
% on 6-8000 u/week	1	1	1	1
% on 8-12000 u/week	1	0	0	0
% on >12000 u/week	0	0	0	0

Table 3.2.39: Distribution of serum Iron without rHuEpo, HD patients, NGO Centres 1999 – 2002

Year	No of subjects	No of observations	Median	LQ	UQ	% Patients > 10 umol/L
1999	41	105	14	10.5	17.6	79
2000	194	338	15.5	10.7	25	78
2001	280	451	14.9	10.5	22.5	77
2002	271	594	13	9	18.4	69

Figure 3.2.39: Cumulative distribution of serum Iron without rHuEpo by year

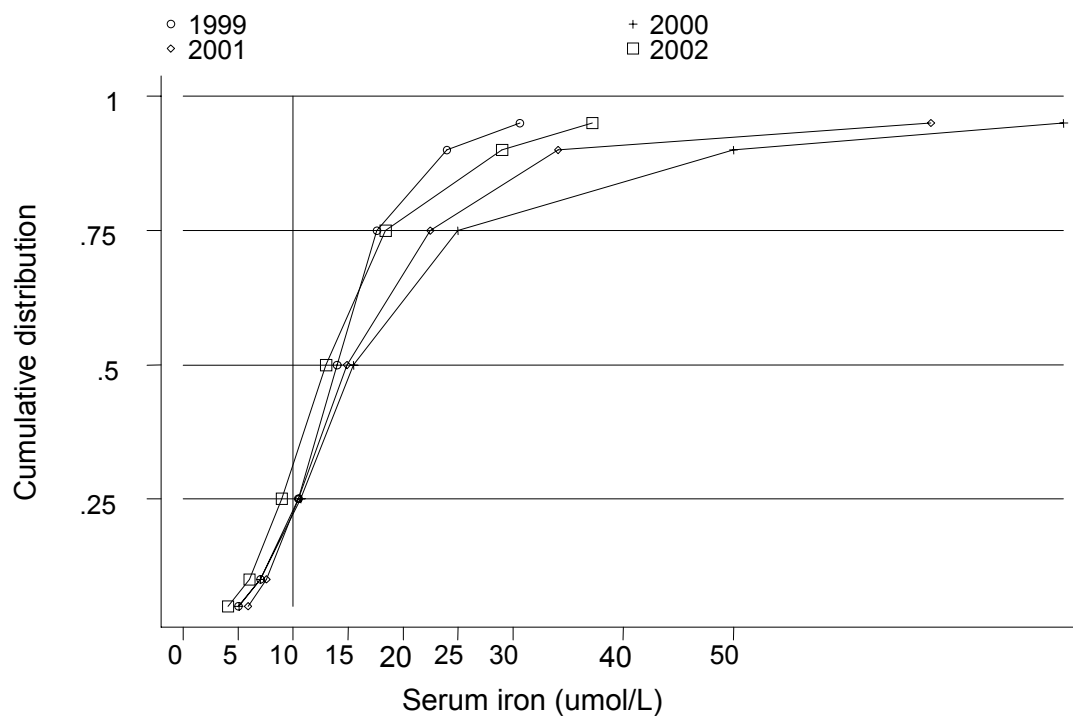


Table 3.2.40: Distribution of serum Iron on rHuEpo,HD patients, NGO Centres 1999 – 2002

Year	No of subjects	No of observations	Median	LQ	UQ	% Patients > 10 umol/L
1999	48	128	15.1	11	23	79
2000	377	746	14.7	10.6	21	77
2001	572	1027	13.3	9.7	19.3	71
2002	679	1505	11.2	8	16.6	58

Figure 3.2.40: Cumulative distribution of serum Iron on rHuEpo by year

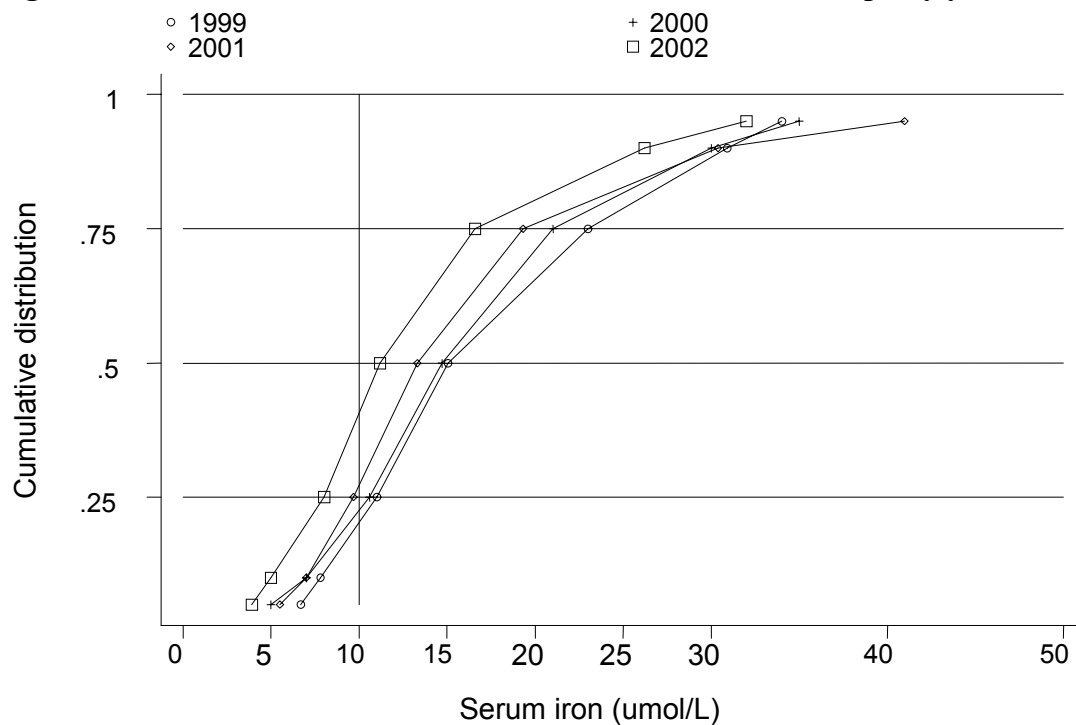


Table 3.2.41: Distribution of serum Transferrin Saturation without rHuEpo, HD patients, NGO Centres 1999 – 2002

Year	No of subjects	No of observations	Median	LQ	UQ	% Patients > 20%
1999	29	116	26.9	21.7	37.7	83
2000	143	572	28.3	19.2	45.1	72
2001	196	784	31.1	21.5	46.7	78
2002	181	724	26.4	16.9	41.9	65

Figure 3.2.41: Cumulative distribution of serum Transferrin Saturation without rHuEpo by year

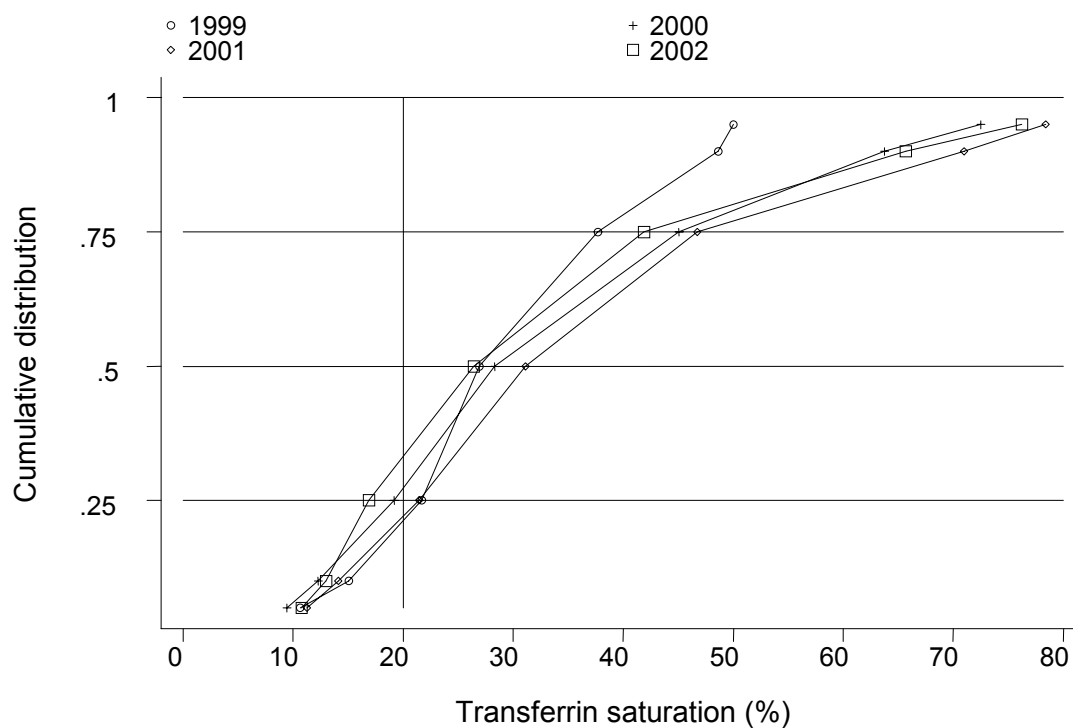


Table 3.2.42: Distribution of serum Transferrin Saturation on rHuEpo, HD patients, NGO Centres 1999 – 2002

Year	No of subjects	No of observations	Median	LQ	UQ	% Patients > 20%
1999	35	140	29.8	20	43.2	74
2000	289	1156	31.3	21.2	45.3	78
2001	429	1716	29.5	21.5	41.4	78
2002	552	2208	25.3	16.6	39.2	66

Figure 3.2.42: Cumulative distribution of serum Transferrin Saturation on rHuEpo by year

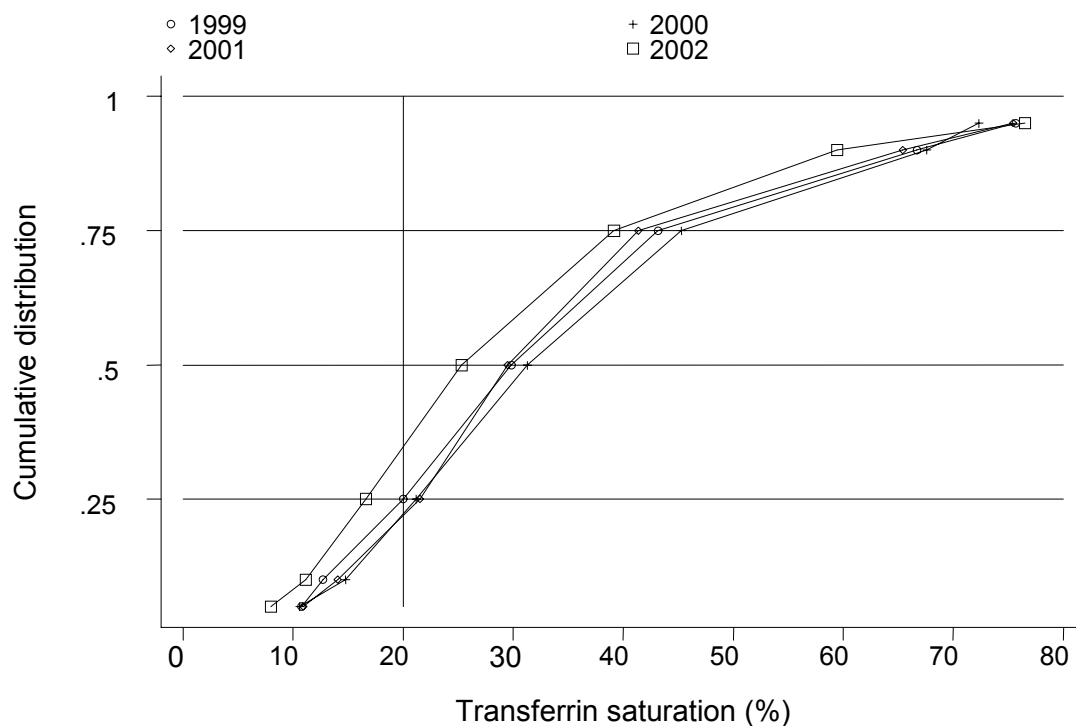


Table 3.2.43: Distribution of serum Ferritin without rHuEpo, HD patients, NGO Centres 1999 – 2002

Year	No of subjects	No of observations	Median	LQ	UQ	% Patients > 100 ug/L
1999	28	46	462.5	222.6	745	89
2000	161	212	432.5	182.5	860	87
2001	271	358	423	177	845	86
2002	305	429	365	173	785	86

Figure 3.2.43: Cumulative distribution of serum Ferritin without rHuEpo by year

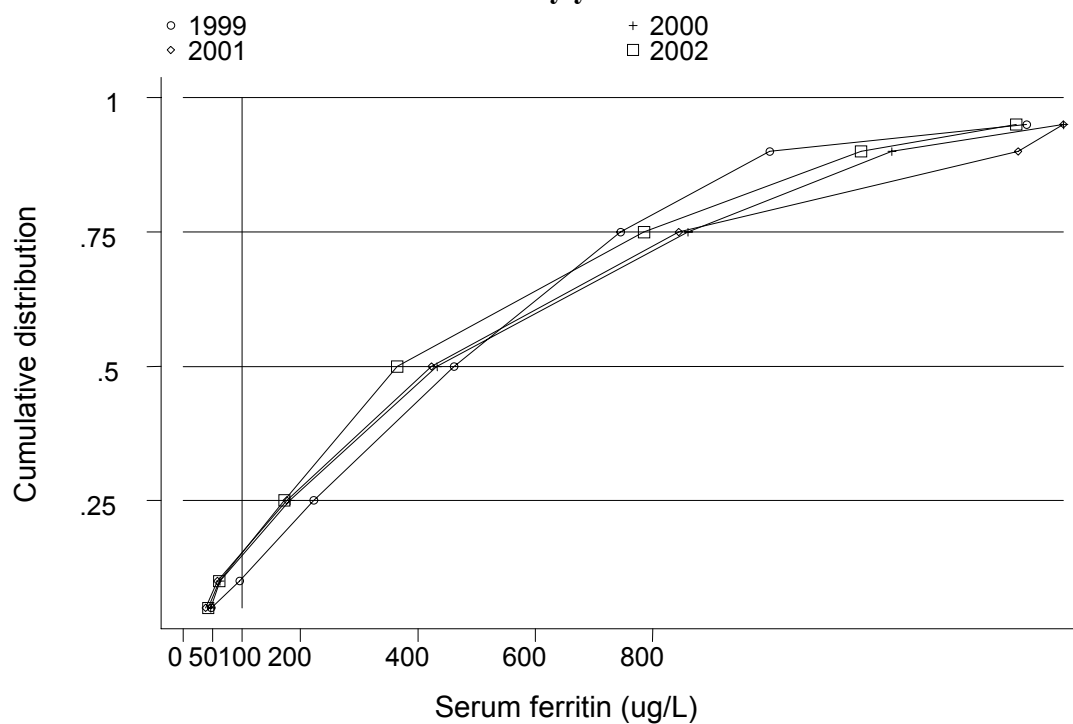


Table 3.2.44: Distribution of serum Ferritin on rHuEpo, HD patients, NGO Centres 1999 – 2002

Year	No of subjects	No of observations	Median	LQ	UQ	% Patients > 100 ug/L
1999	39	63	392	176	1000	94
2000	361	514	509.5	240	971	90
2001	589	870	489.5	227	903	91
2002	823	1263	482	236	895	90

Figure 3.2.44: Cumulative distribution of serum Ferritin on rHuEpo by year

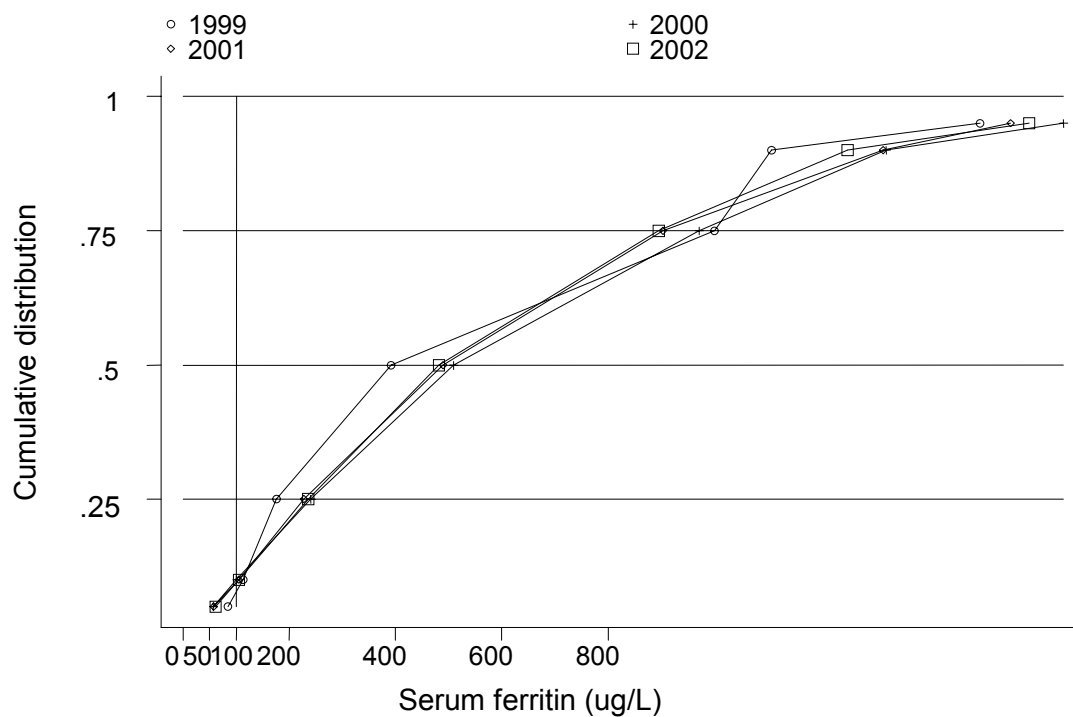


Table 3.2.45: Distribution of Haemoglobin without rHuEpo, HD patients, NGO Centres 1999 – 2002

Year	No of subjects	No of observations	Median	LQ	UQ	% Patients <10 g/dL	% Patients ≥ 10 & ≤ 12 g/dL	% Patients >12 g/dL
1999	318	856	9.1	7.9	10.4	65	26	9
2000	574	1472	9.1	7.9	10.9	63	24	13
2001	644	1688	9.3	8	10.6	63	25	11
2002	661	1858	9.5	8.1	11	59	27	14

Figure 3.2.45: Cumulative Distribution of Haemoglobin without rHuEpo by year

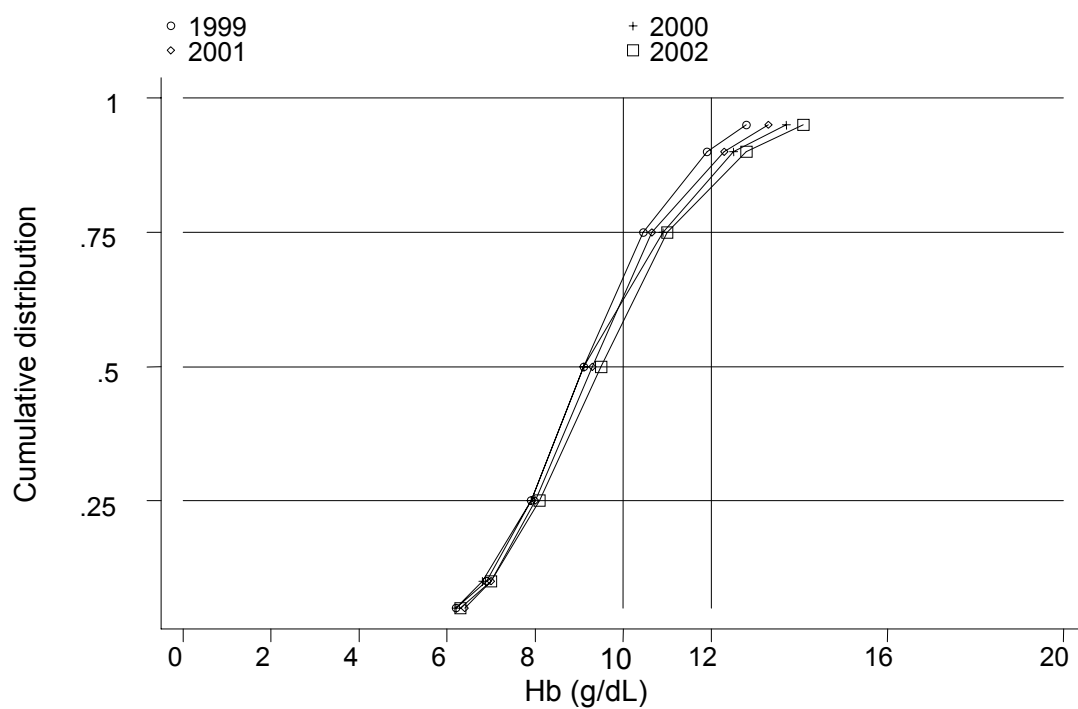
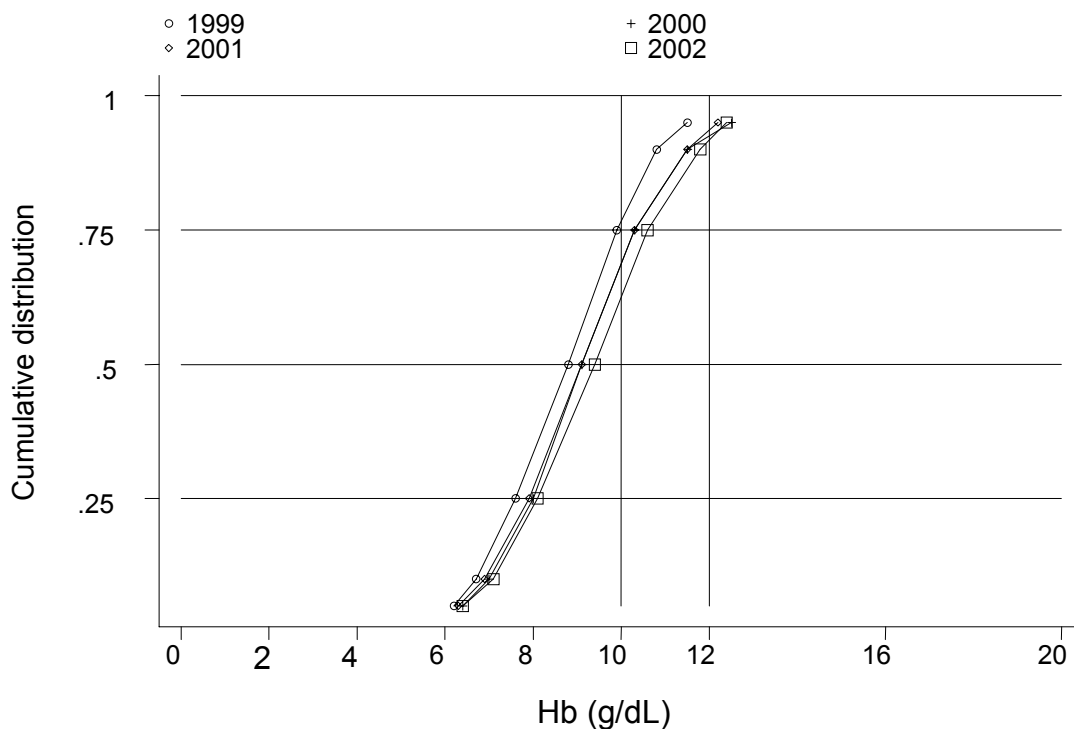


Table 3.2.46: Distribution of Haemoglobin on rHuEpo, HD patients, NGO Centres 1999 – 2002

Year	No of subjects	No of observations	Median	LQ	UQ	% Patients <10 g/dL	% Patients ≥ 10 & ≤ 12 g/dL	% Patients >12 g/dL
1999	378	1123	8.8	7.6	9.9	76	22	3
2000	759	2177	9.1	8	10.3	67	26	7
2001	1092	3307	9.1	7.9	10.3	67	27	6
2002	1415	4291	9.4	8.1	10.6	62	30	8

Figure 3.2.46: Cumulative distribution of Haemoglobin on rHuEpo by year



3.2.13 NUTRITIONAL STATUS OF HD PATIENTS, NGO CENTRES

Table 3.2.47: Distribution of serum Albumin (g/L), HD patients, NGO Centres 1999 – 2002

Year	No of subjects	No of observations	Median	LQ	UQ	% Patients >40g/L
1999	647	1502	39	36	42	44
2000	1220	3311	39	36	41	39
2001	1721	4641	38	35	41	33
2002	2095	5938	39	36	41	44

Figure 3.2.47: Cumulative distribution of serum Albumin by year

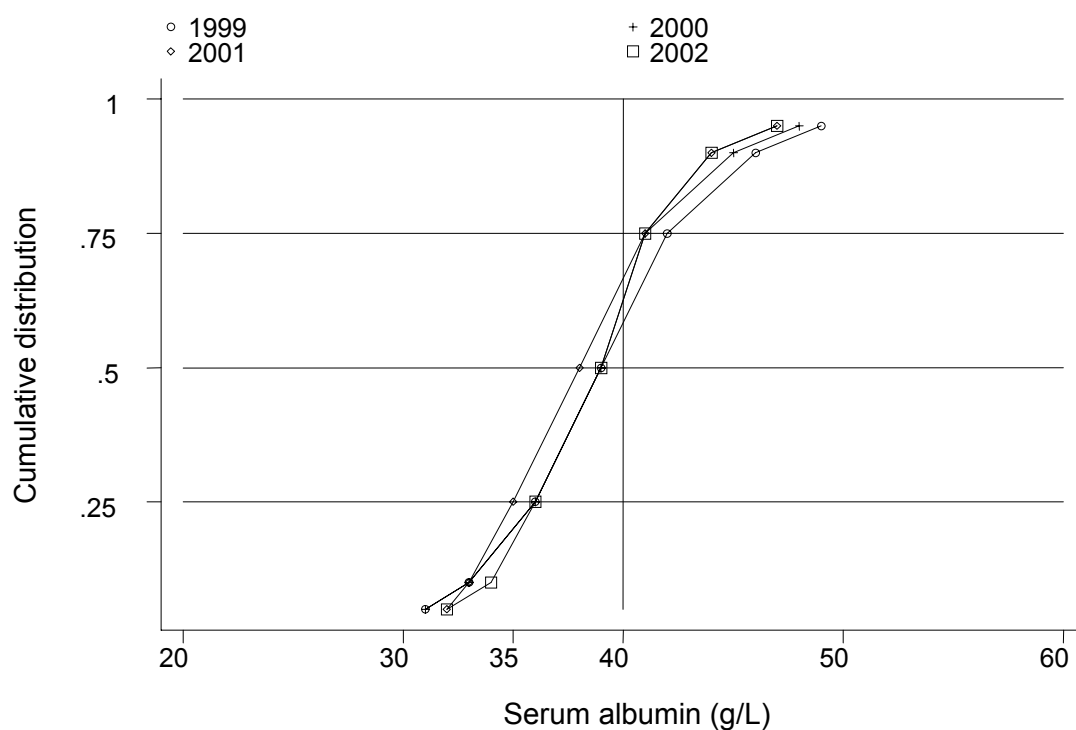
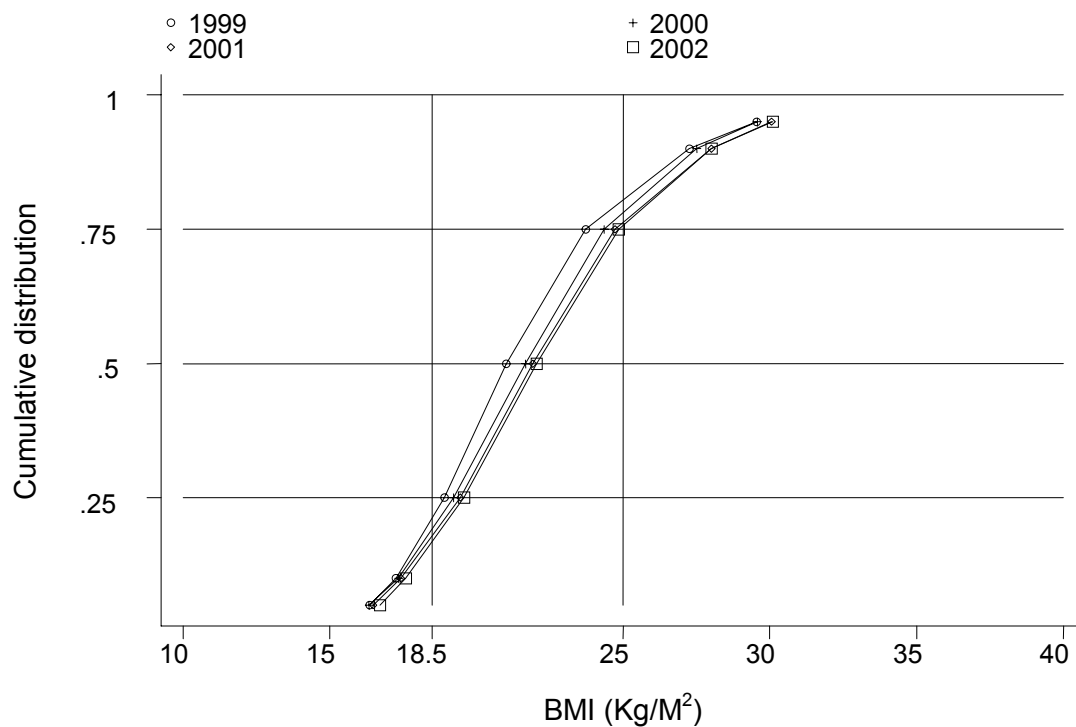


Table 3.2.48: Distribution of Body Mass Index, HD patients, NGO Centres 1999 – 2002

Year	No of subjects	No of observations	Median	LQ	UQ	% Patients <18.5	% Patients ≥ 18.5 & ≤ 25	% Patients >25
1999	607	5957	21	18.9	23.7	20	62	18
2000	1217	12077	21.7	19.2	24.3	19	60	21
2001	1532	15266	21.9	19.5	24.7	17	60	23
2002	1820	18849	22	19.6	24.8	16	60	24

Figure 3.2.48: Cumulative distribution of BMI by year



3.2.14 SEROLOGICAL STATUS, HD PATIENTS , NGO CENTRES

Table 3.2.49: Prevalence of positive anti-HCV and HbsAg, HD patients, NGO Centres 1999 – 2002

Year	No	% HBsAg positive	% anti-HCV positive
1999	728	8	18
2000	1531	6	20
2001	1905	6	17
2002	2223	6	16

Figure 3.2.49: Prevalence of positive anti-HCV and HbsAg HD patients, NGO Centres 1999 – 2002

