

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

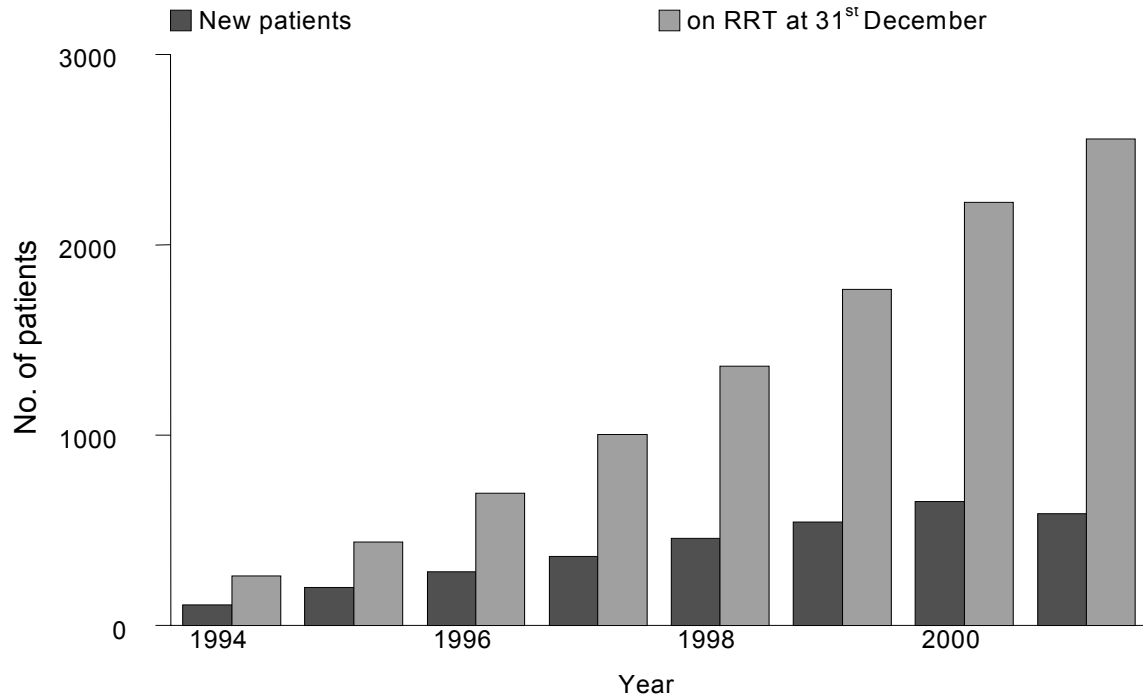
3.2: HAEMODIALYSIS IN NON-GOVERNMENTAL ORGANISATION (NGO) CENTRES

3.2.1 STOCK AND FLOW

Table 3.2.01: Stock and Flow HD patients, NGO Centres 1994 – 2001

Year	1994	1995	1996	1997	1998	1999	2000	2001
New patients	107	198	280	362	457	542	650	587
Died	8	15	20	43	84	116	154	205
Transferred to PD	0	0	0	0	1	4	8	10
Transplanted	6	2	5	8	13	15	28	33
Lost to Follow up	1	1	1	1	1	2	3	9
On HD at 31 st December	260	440	694	1004	1362	1767	2224	2554

Figure 3.2.01: Stock and Flow HD patients, NGO Centres 1994 – 2001



3.2.3 DEATH ON HAEMODIALYSIS, NGO CENTRES

Table 3.2.04: Death Rate on HD and Transfer to PD, NGO Centres 1994 – 2001

Year	1994	1995	1996	1997	1998	1999	2000	2001
No. of patients at risk	260	350	567	849	1183	1565	1996	2389
Deaths	8	15	20	43	84	116	154	205
Death rate %	3	4	4	5	7	7	8	9
Transfer to PD	0	0	0	0	1	4	8	10
Transfer to PD rate %	0	0	0	0	0	0	0	0
All Losses	8	15	20	43	85	120	162	215
All Losses rate %	3	4	4	5	7	8	8	9

Figure 3.2.04: Death Rate on HD, NGO Centres, 1994 – 2001

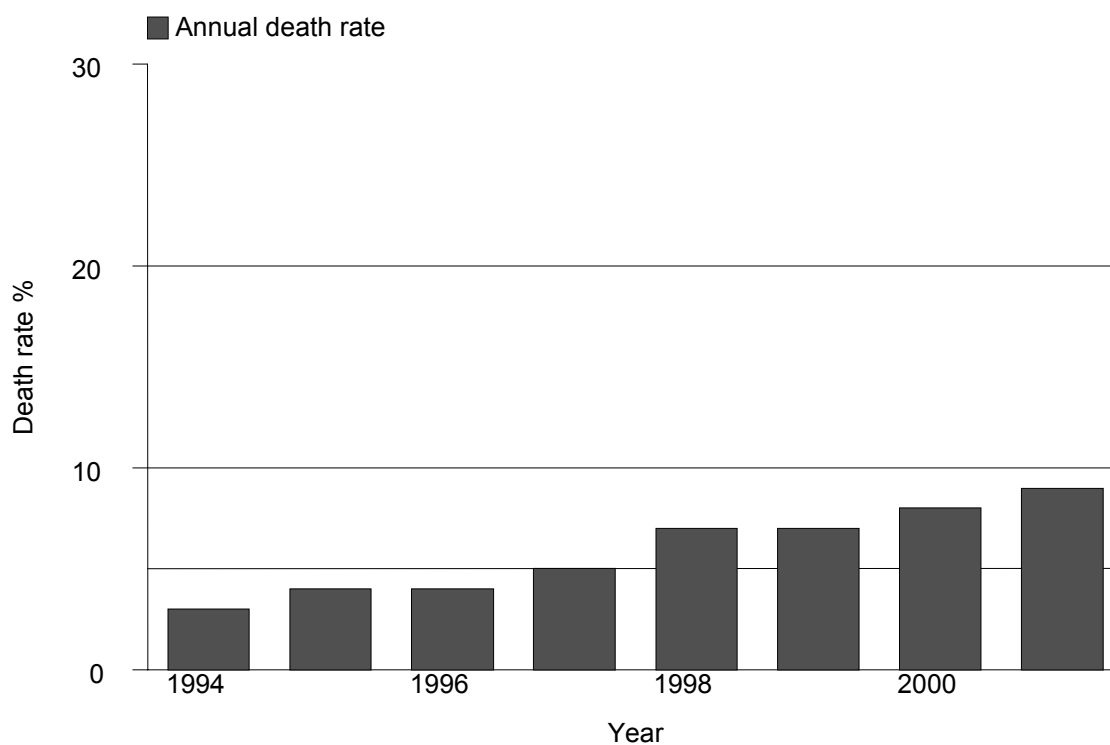


Table 3.2.05: Causes of Death, NGO Centres 1998 – 2001

Causes of death	1998		1999		2000		2001	
	No.	%	No.	%	No.	%	No.	%
Cardiovascular	38	45	38	33	58	38	53	26
Died at home	6	7	17	15	38	25	67	33
Sepsis	7	8	12	10	16	10	34	17
GIT bleed	2	2	3	3	1	1	3	1
Cancer	1	1	2	2	1	1	6	3
Liver disease	1	1	4	3	3	2	3	1
Others	25	30	31	27	36	23	25	12
Unknown	4	5	9	8	1	1	14	7
Total	84	100	116	100	154	100	205	100

3.2.4 NGO HAEMODIALYSIS CENTRES

Table 3.2.07: Centre Distribution of HD patients, NGO Centres, 2001

	Centre	No	percent
	No.on HD at 31 st December	2554	100
1	AMD Rotary Dialysis Centre, Penang	9	0
2	Amitabha Haemodialysis Centre	21	1
3	Bakti-NKF Dialysis Centre, Kelang	53	2
4	Batu Pahat Rotary Haemodialysis Centre	54	2
5	Berjaya NKF Dialysis Centre, Petaling Jaya	57	2
6	Buddhist Tzu-Chi Dialysis Centre	50	2
7	Buddhist Tzu-Chi Dialysis Centre	2	0
8	CHKMUS-MAA Medical Charity Dialysis Centre, Kuching	70	3
9	Charis-NKF Dialysis Centre, Cheras	79	3
10	Che Eng Khor Haemodialysis Centre	41	2
11	Fo Yi Haemodialysis Centre	27	1
12	Haemodialysis Association Klang	38	1
13	JB Lion MAA-Medicare Charity Dialysis	78	3
14	KAS-Rotary/NKF Dialysis Centre, Sarawak	22	1
15	KB Rotary-MAA Dialysis Centre	21	1
16	Kluang Rotary Haemodialysis Centre	30	1
17	Lion Club of Alor Setar-NKF Dialysis Centre	39	2
18	MAA-Medicalre Charity Dialysis Centre, Butterworth	52	2
19	MAA-Medicare Charity Dialysis Centre, Cheras	54	2
20	MAA-Medicare Charity Dialysis Centre, Kajang	43	2
21	MAA-Medicare Charity Dialysis Centre, Kuala Lumpur	93	4
22	MAA-Medicare Charity Dialysis Centre, Teluk Intan	50	2
23	Mersing Rotary Haemodialysis Centre	2	0
24	Moral Uplifting-NKF Dialysis Centre, Ipoh	60	2
25	Muar Lions Renal Centre	82	3
26	NKF Dialysis Centre, Kuala Lumpur	48	2
27	Pahang Buddhist Association Haemodialysis Centre	26	1
28	Persatuan Buah Pinggang Sabah	24	1
29	Persatuan Bulan Sabit Merah Cawangan Miri	44	2

30	Persatuan Membaiki Akhlak Che Luan Khor	41	2
31	Pertubuhan Bakti Fo En Bandar Kulim	4	0
32	Pertubuhan Hemodialisis Seberang Perai Selatan	31	1
33	Pontian Rotary Haemodialysis Centre	49	2
34	Pusat Dialisis Klinik Waqaf An-nur	30	1
35	Pusat Hemodialisis Darul Iltizam	51	2
36	Pusat Hemodialisis MCA Pasar Meru	4	0
37	Pusat Hemodialisis Manjung-NKF	45	2
38	Pusat Hemodialisis Mawar N. Sembilan, Bahau	23	1
39	Pusat Hemodialisis Mawar N. Sembilan, Lukut	25	1
40	Pusat Hemodialisis Mawar N. Sembilan, Seremban	106	4
41	Pusat Hemodialisis Rotary Kota Tinggi	20	1
42	Pusat Hemodialisis Rotary Kulai	70	3
43	Pusat Hemodialisis SJAM Bacang Melaka	104	4
44	Pusat Hemodialisis Yayasan Felda	56	2
45	Pusat Hemodialisis Zakat	3	0
46	Pusat Muhibah Hemodialisis Pesatuan Tionghua Segamat	77	3
47	Pusat Rawatan Dialisis Yayasan Pembangunan Keluarga Johor-NKF	13	1
48	Pusat Rawatan Islam, Kuala Lumpur	31	1
49	Pusat Rawatan Islam, Petaling Jaya	12	0
50	Rotary Club Damansara-NKF Dialysis Centre, Kepong	56	2
51	Rotary Club Tawau Tanjung Haemodialysis Centre	7	0
52	Rotary Haemodialysis Centre, Johor Bahru	33	1
53	SJAM-KPS Haemodialysis, Kelang	51	2
54	Sibu Kidney Foundation Haemodialysis Centre	45	2
55	Superkids Trinity-NKF Dialysis Centre, Alor Setar	14	1
56	TDC-NKF Trengganu Dialysis Centre	29	1
57	The Nayang-NKF Dialysis Centre, Setapak	14	1
58	The Penang Community Haemodialysis Society	28	1
59	Woh Peng Cheang Seah Dialysis Centre	36	1
60	Yayasan Dialisis Pertubohan Pendidikan Akhlak-NKF, Taiping	23	1
61	Yayasan Hemodialisis Kebajikan Southern Melaka	53	2
62	Yayasan Kebajikan SSL Heamodialisis	100	4

3.2.5 HAEMODIALYSIS PATIENTS' CHARACTERISTICS, NGO CENTRES

Table 3.2.08: Age Distribution of Dialysis Patients, NGO Centres 1998 – 2001

Year	1998	1999	2000	2001
New Dialysis patients	457	542	650	587
1-14 years	0	0	0	0
15-24 years	3	2	2	3
25-34 years	12	12	9	9
35-44 years	19	16	17	16
45-54 years	28	30	32	27
55-64 years	26	27	24	28
≥65 years	13	13	16	17
Dialysing at 31 st December	1362	1767	2224	2554
1-14 years	0	0	0	0
15-24 years	4	3	3	3
25-34 years	14	14	13	12
35-44 years	23	22	21	21
45-54 years	28	28	29	29
55-64 years	22	23	23	23
≥65 years	9	10	11	12

Table 3.2.09: Patients' Characteristics, NGO Centres 1998 – 2001

Year	1998	1999	2000	2001
New Dialysis patients	457	542	650	587
Mean age±sd	50±13	50±13	51±13	52±14
% male	53	59	58	53
% Diabetic	45	41	47	48
% HbsAg+	4	4	4	5
% Anti-HCV+	5	6	3	3

3.2.6 SURVIVAL ANALYSIS, NGO CENTRES

Table 3.2.10: HD Patient Survival, NGO Centres 1996 – 2001

Year	1996			1997			1998		
Interval (months)	% survival	SE	No	% survival	SE	No	% survival	SE	No
6	97	1	272	95	1	345	96	1	439
12	96	1	264	92	1	326	93	1	415
24	91	2	248	83	2	293	86	2	373
36	78	3	214	77	2	271	78	2	331
48	73	3	201	73	2	248	96	1	439
60	67	3	178	95	1	345	93	1	415

Year	1999			2000			2001		
Interval (months)	% survival	SE	No	% survival	SE	No	% survival	SE	No
6	97	1	522	97	1	619	96	1	281
12	94	1	497	92	1	578			
24	87	1	449						

No. = number at risk SE = standard error

Figure 3.2.10: HD Patient Survival, NGO Centres 1997 –2001

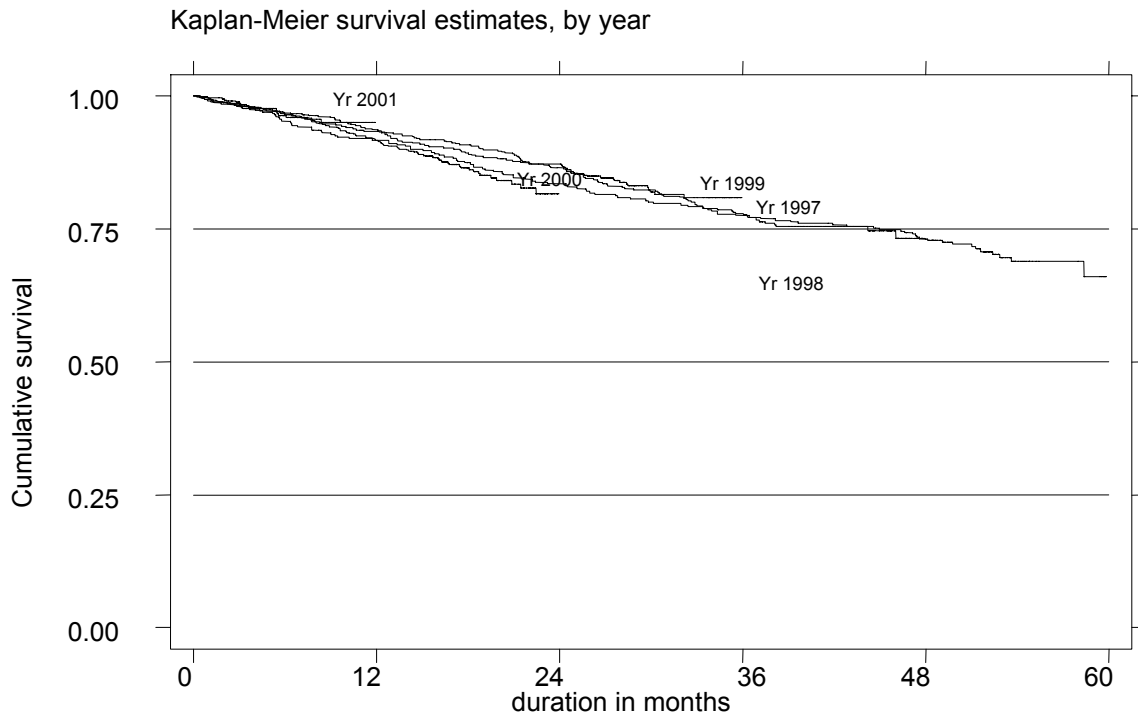


Table 3.2.11: HD Technique Survival, NGO Centres 1996-2001

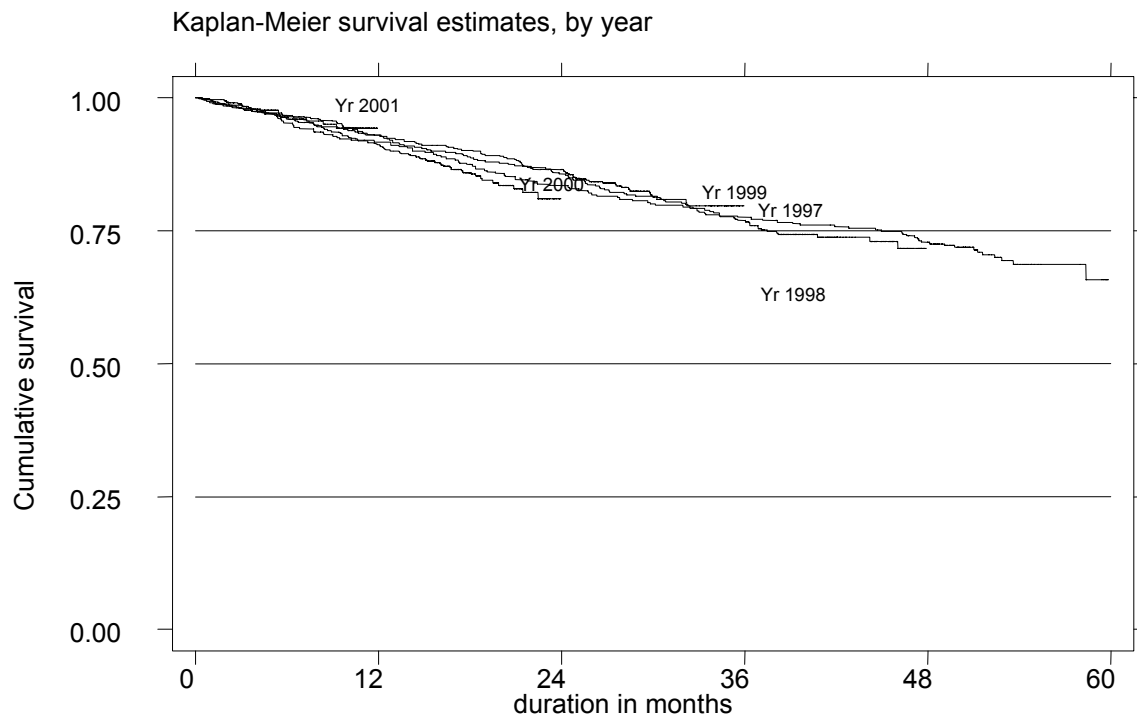
Year	1996			1997			1998		
Interval (months)	% survival	SE	No	% survival	SE	No	% survival	SE	No
6	97	1	272	95	1	345	96	1	439
12	96	1	264	92	1	326	93	1	415
24	91	2	248	83	2	293	86	2	373
36	78	3	214	77	2	271	77	2	331
48	73	3	201	73	2	248			
60	66	3	178						

Year	1999			2000			2001		
Interval (months)	% survival	SE	No	% survival	SE	No	% survival	SE	No
6	97	1	522	96	1	619	96	1	281
12	93	1	497	91	1	578			
24	87	1	449						

No. = number at risk

SE = standard error

Figure 3.2.11 HD Technique Survival by year of entry, NGO centres 1997 –2001



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 1998-2001

REHABILITATION STATUS	1998		1999		2000		2001	
	No.	%	No.	%	No.	%	No.	%
Full time work for pay	78	21	119	18	203	17	175	11
Part time work for pay	53	14	110	17	184	15	264	17
Able to work but unable to get a job	15	4	28	4	64	5	81	5
Able to work but not yet due to dialysis schedule	10	3	35	5	29	2	56	4
Able but disinclined to work	3	1	22	3	33	3	26	2
Home maker	115	31	190	29	319	27	380	25
Full time student	0	0	1	0	1	0	2	0
Age<15 years	0	0	0	0	0	0	0	0
Retired	25	7	44	7	110	9	115	7
Age>65 years	23	6	34	5	124	10	194	13
Unable to work due to poor health	46	13	76	12	131	11	256	17
Total	368	100	659	100	1198	100	1549	100

Table 3.2.13: Quality of Life on Haemodialysis, NGO Centres 1998 – 2001

QOL Index Summated Score	1998		1999		2000		2001	
	No.	%	No.	%	No.	%	No.	%
0 (Worst QOL)	0	0	0	0	0	0	3	0
1	0	0	0	0	2	0	3	0
2	0	0	2	0	4	0	4	0
3	4	1	4	1	21	2	27	2
4	12	3	16	2	26	2	53	3
5	9	3	24	4	39	3	87	6
6	21	6	30	5	72	6	113	7
7	18	5	58	9	88	7	141	9
8	36	10	74	11	100	8	146	9
9	29	8	70	11	138	11	226	15
10 (Best QOL)	225	64	377	58	723	60	741	48
Total	354	100	655	100	1213	100	1544	100

3.2.8 HAEMODIALYSIS PRACTICES IN NGO CENTRES

Table 3.2.14: Vascular Access on Haemodialysis, NGO Centres 1998 – 2001

Access types	1998		1999		2000		2001	
	No	%	No	%	No	%	No	%
Wrist AVF	364	87	605	84	1302	86	1513	83
BCF*	43	10	94	13	179	12	255	14
Venous graft	3	1	2	0	3	0	8	0
Artificial graft	3	1	5	1	11	1	17	1
PERMCATH	0	0	3	0	2	0	5	0
Temporary CVC*	5	1	11	2	16	1	14	1
Total	418	100	720	100	1513	100	1812	100

* BCF = Brachiocephalic fistula

* CVC = Central venous catheter

Table 3.2.15: Difficulties reported with Vascular Access, NGO Centres 1998 – 2001

Access difficulty	1998		1999		2000		2001	
	No	%	No	%	No	%	No	%
Difficulty with needle placement	12	3	23	3	41	3	66	4
Difficulty in obtaining desired blood flow rate	11	3	19	3	36	2	61	3
Other difficulty	5	1	12	2	10	1	14	1
No difficulty	401	93	670	93	1432	94	1674	92
Total	429	100	724	100	1519	100	1815	100

Table 3.2.16: Complications reported with Vascular Access, NGO Centres 1998 – 2001

Complication	1998		1999		2000		2001	
	No.	%	No.	%	No.	%	No.	%
Thrombosis	9	2	26	4	46	3	71	4
Bleed	8	2	3	0	5	0	15	1
Aneurysmal dilatation	6	1	16	2	44	3	33	2
Swollen limb	1	0	8	1	14	1	14	1
Access related infection, local/Systemic	3	1	3	0	8	1	6	0
Distal Limb ischaemia	2	0	0	0	15	1	13	1
Venous outflow obstruction	8	2	17	2	16	1	20	1
Carpal tunnel	0	0	1	0	5	0	10	1
Other	8	2	13	2	9	1	32	2
No complication	384	90	637	88	1361	89	1601	88
Total	429	100	724	100	1523	100	1815	100

Table 3.2.17: Blood Flow Rates in NGO HD Units 1998 – 2001

Blood flow rates	1998		1999		2000		2001	
	No.	%	No.	%	No.	%	No.	%
<150 ml/min	0	0	1	0	3	0	0	0
150-199 ml/min	8	2	13	2	31	2	28	2
200-249 ml/min	209	52	335	48	513	35	544	31
250-299 ml/min	156	39	288	41	762	52	911	52
300-349 ml/min	28	7	59	8	143	10	242	14
> 350 ml/min	1	0	2	0	13	1	23	1
Total	402	100	698	100	1465	100	1748	100

Table 3.2.18: Number of HD Sessions per week, NGO HD Units 1998 – 2001

HD sessions Per week	1998		1999		2000		2001	
	No.	%	No.	%	No.	%	No.	%
1	0	0	1	0	4	0	2	0
2	3	1	20	3	91	6	60	3
3	418	99	700	97	1405	93	1751	96
4	0	0	1	0	5	0	2	0
Total	421	100	722	100	1513	100	1815	100

Table 3.2.19: Duration of HD in NGO HD Units 1998 – 2001

Duration of HD per session	1998		1999		2000		2001	
	No.	%	No.	%	No.	%	No.	%
≤3 hours	0	0	1	0	2	0	2	0
3.5 hours	0	0	1	0	2	0	2	0
4 hours	418	99	715	99	1480	98	1805	99
4.5 hours	4	1	2	0	20	1	4	0
5 hours	0	0	2	0	8	1	2	0
≥5 hours	0	0	0	0	2	0	0	0
Total	422	100	721	100	1514	100	1815	100

Table 3.2.20: Dialyser membrane types in NGO HD Units 1998 – 2001

Dialyser membrane	1998		1999		2000		2001	
	No.	%	No.	%	No.	%	No.	%
Cellulosic	261	68	331	55	460	39	401	31
Cellulose acetate	87	23	160	27	189	16	213	17
Synthetic	38	10	107	18	523	45	676	52
Total	386	100	598	100	1172	100	1290	100

Table 3.2.21: Dialyser Reuse Frequency in NGO HD Units 1998 – 2001

Dialyser reuse frequency	1998		1999		2000		2001	
	No.	%	No.	%	No.	%	No.	%
1*	1	0	6	1	44	3	77	5
2	0	0	2	0	4	0	7	0
3	30	8	47	7	75	5	41	2
4	12	3	26	4	65	5	92	5
5	30	8	101	15	165	12	148	9
6	302	77	397	59	573	41	424	25
7	1	0	3	0	2	0	14	1
8	3	1	40	6	191	14	460	27
9	1	0	6	1	38	3	42	2
10	14	4	30	4	155	11	138	8
11	0	0	0	0	0	0	0	0
12	0	0	11	2	51	4	87	5
≥13	0	0	0	0	47	3	173	10
Total	394	100	669	100	1410	100	1703	100

1* is single use i.e. no reuse

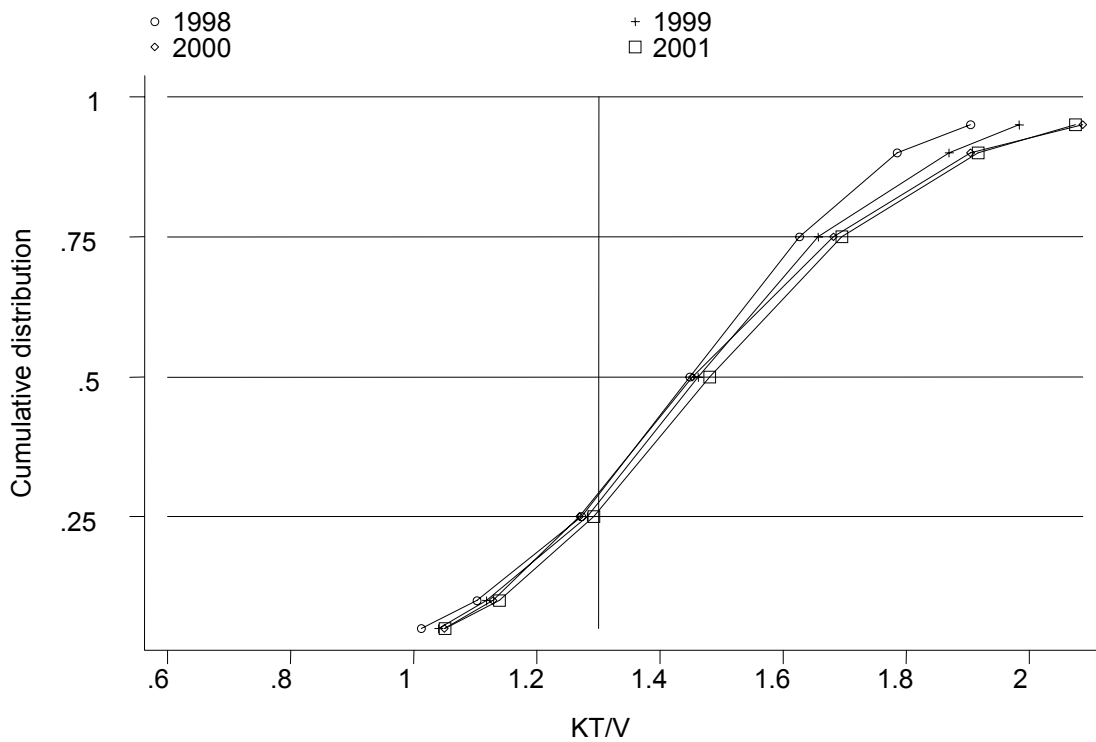
Table 3.2.22: Dialysate Buffer used in NGO HD Units 1998 – 2001

Dialysate buffer	1998		1999		2000		2001	
	No.	%	No.	%	No.	%	No.	%
Acetate	52	13	51	7	24	2	9	1
Bicarbonate	362	87	659	93	1483	98	1788	99
Total	414	100	710	100	1507	100	1797	100

Table 3.2.23: Distribution of Prescribed KT/V, NGO Centres 1998 – 2001

Year	No of subjects	No of observations	median	LQ	UQ	% > 1.3
1998	380	3764	1.4	1.3	1.6	72
1999	667	6629	1.5	1.3	1.7	73
2000	1313	13206	1.5	1.3	1.7	71
2001	1668	16916	1.5	1.3	1.7	74

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 1998 – 2001

year	No of subjects	No of observations	median	LQ	UQ	% patients < 5.3 mmol/l
1998	101	160	4.8	4.1	5.6	71
1999	159	261	5	4.1	5.7	67
2000	925	1461	5	4.2	5.9	64
2001	1434	2220	5	4.2	5.9	63

Figure 3.2.24: Cumulative distribution of serum cholesterol concentration by year

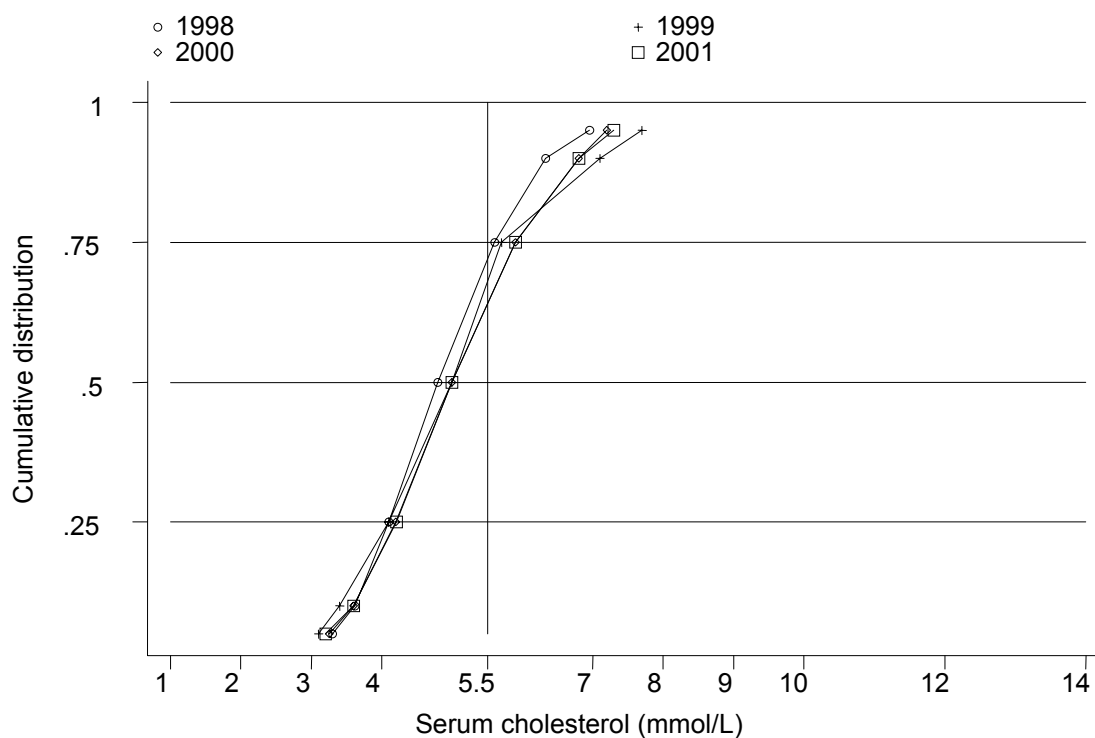


Table 3.2.25: Distribution of serum Triglyceride (mmol/l), HD patients, NGO Centres 1998 – 2001

Year	No of subjects	No of observations	median	LQ	UQ	% patients < 3.5 mmol/l
1998	88	135	1.8	1.3	2.8	87
1999	137	222	1.8	1.3	2.6	85
2000	586	902	1.8	1.3	2.7	86
2001	936	1274	1.7	1.1	2.6	86

Figure 3.2.25: Cumulative distribution of serum triglyceride concentration by year

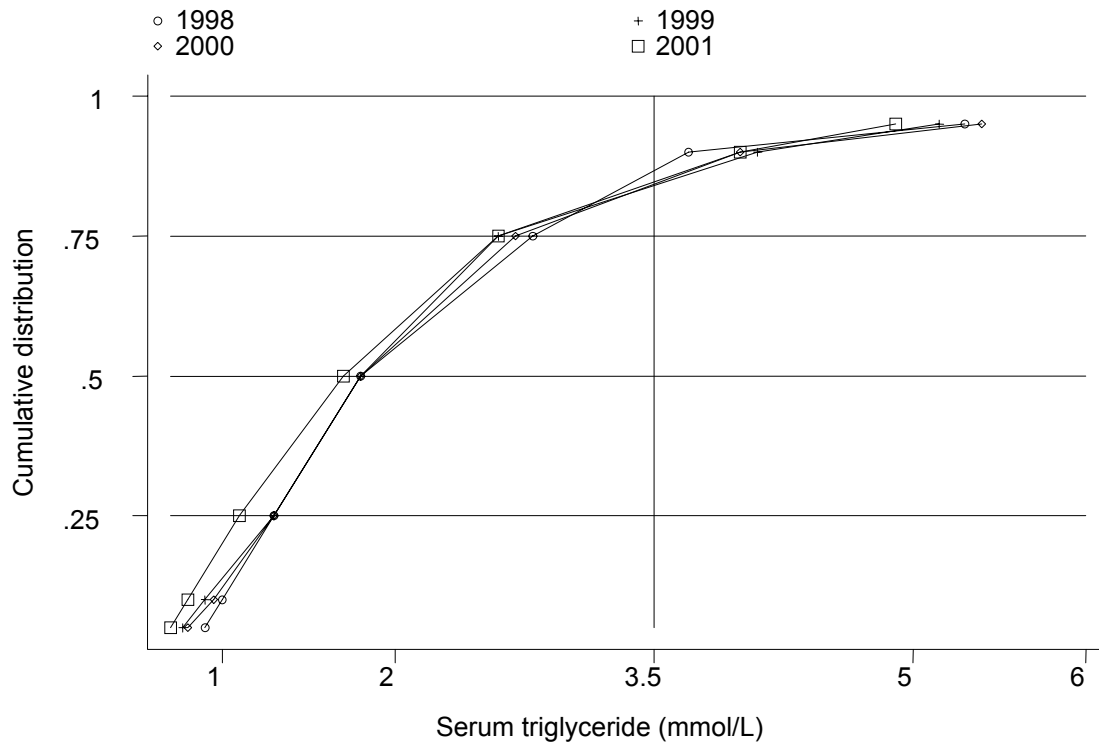


Table 3.2.26: Distribution of serum LDL (mmol/l), HD patients, NGO Centres 1998 – 2001

year	No of subjects	No of observations	median	LQ	UQ	% patients <5 mmol/l
year	n	obs	M	LQ	UQ	pct
1998	32	47	2.6	1.4	3.3	96
1999	37	47	2.8	2.4	3.5	94
2000	448	638	2.9	2.2	3.6	96

Figure 3.2.26 : Cumulative distribution of serum LDL by year

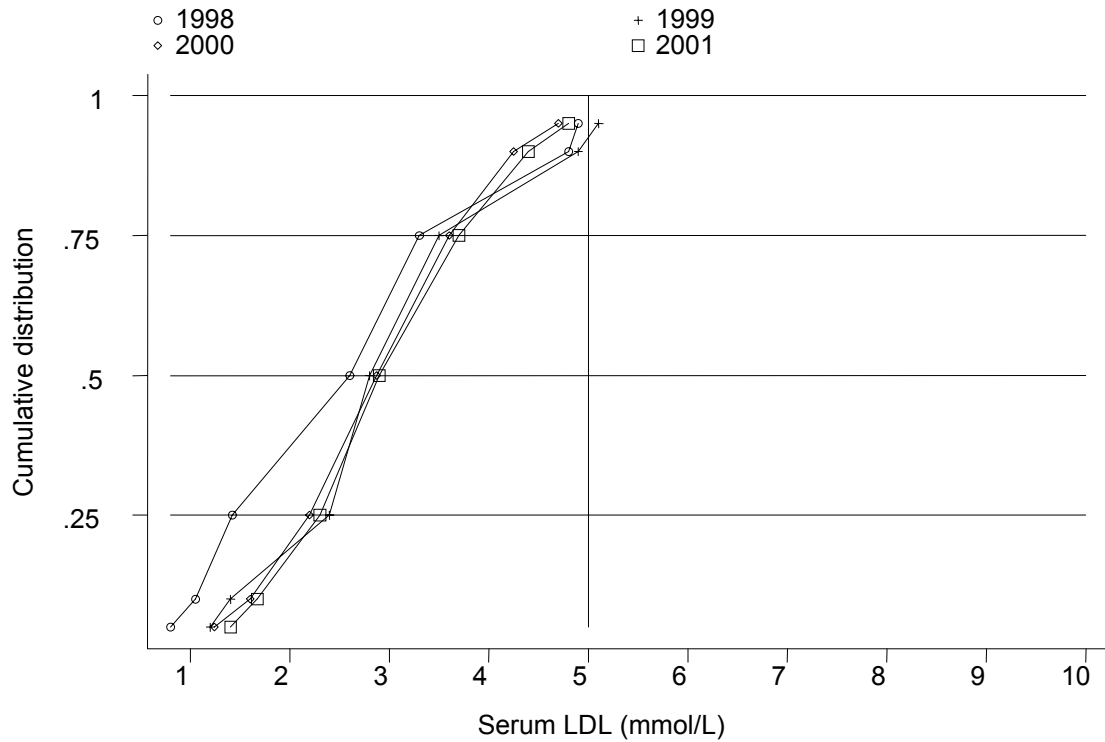
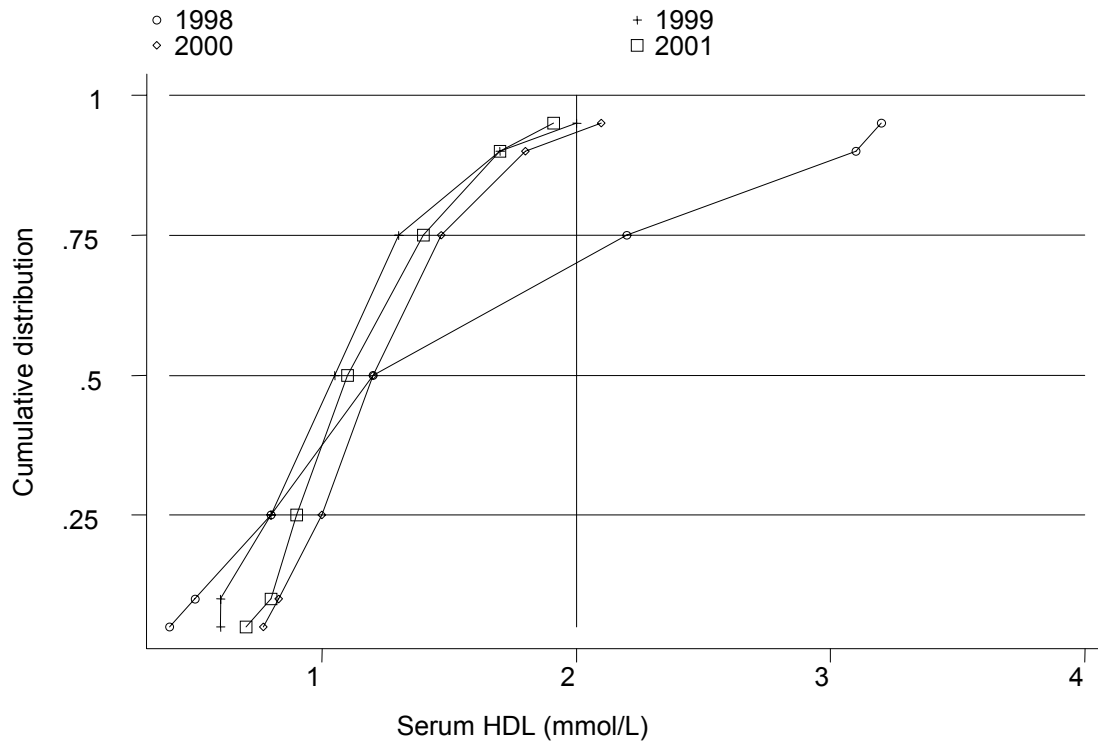


Table 3.2.27: Distribution of serum HDL (mmol/l), HD patients, NGO Centres 1998 – 2001

year	No of subjects	No of observations	median	LQ	UQ	% patients < 2mmol/l
1998	33	49	1.2	.8	2.2	73
1999	39	49	1	.8	1.3	94
2000	475	689	1.2	1	1.5	93
2001	769	1031	1.1	.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 1998 – 2001

year	No of subjects	% on CaCO ₃	% on Al(OH) ₃	% on Vitamin D
1998	430	96	9	38
1999	726	90	6	29
2000	1533	91	3	22
2001	1828	95	1	20

Table 3.2.29: Distribution of serum Phosphate (mmol/l), HD patients, NGO Centres 1998– 2001

Year	No of subjects	No of observations	median	LQ	UQ	% patients < 1.6 mmol/l
1998	406	1130	1.9	1.5	2.3	29
1999	688	1905	1.9	1.5	2.3	30
2000	1390	3686	1.8	1.5	2.2	32
2001	1655	4478	1.8	1.4	2.2	36

Figure 3.2.29: Cumulative distribution of serum Phosphate by year

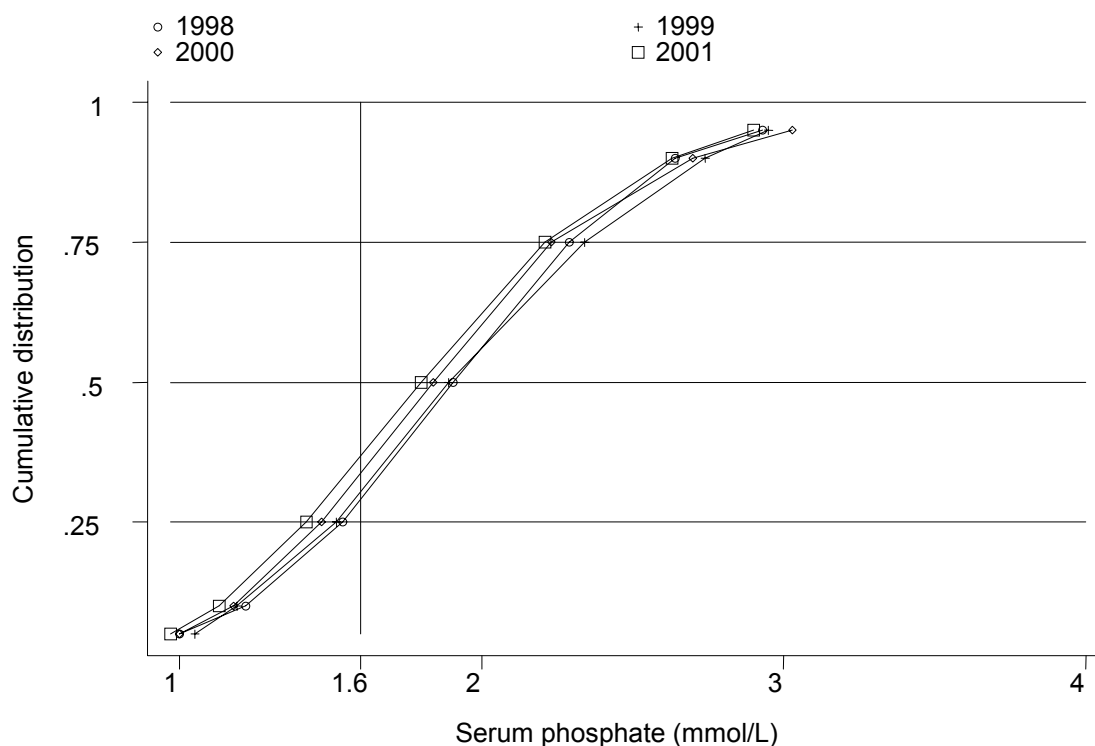
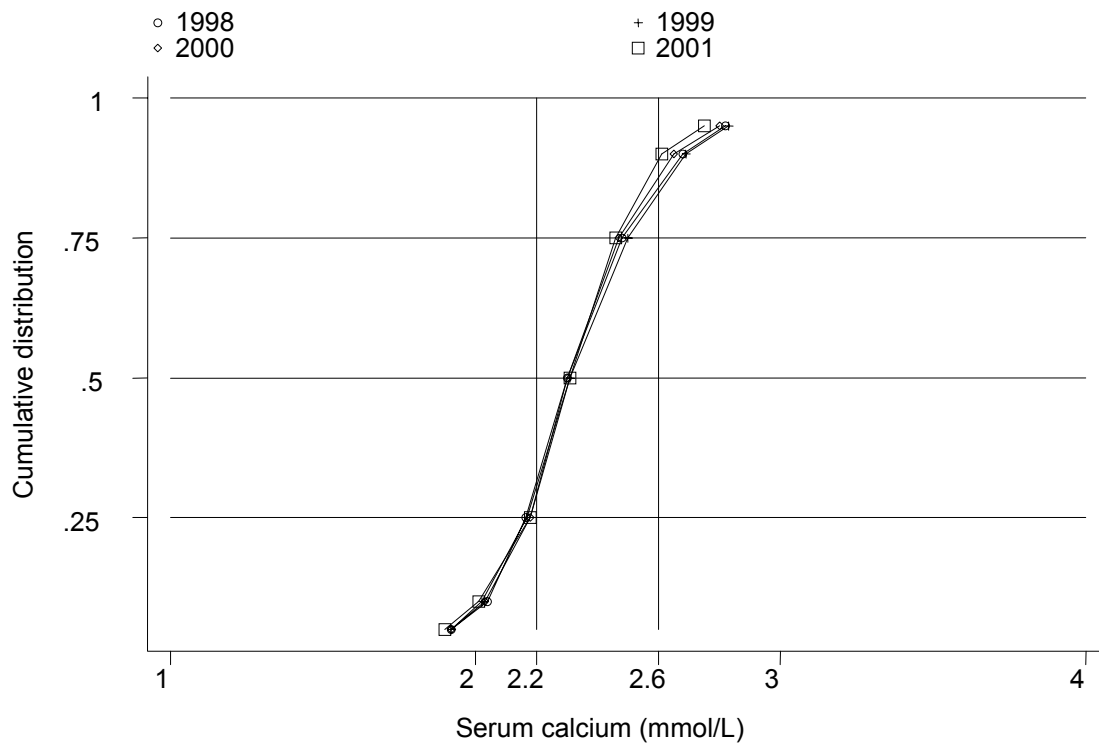


Table 3.2.30: Distribution of serum Calcium (mmol/l), HD patients, NGO Centres 1998 – 2001

year	No of subjects	No of observations	median	LQ	UQ	% patients ≥ 2.2 & ≤ 2.6 mmol/l
1998	412	1144	2.3	2.2	2.5	56
1999	696	1925	2.3	2.2	2.5	56
2000	1386	3717	2.3	2.2	2.5	61
2001	1663	4536	2.3	2.2	2.5	61

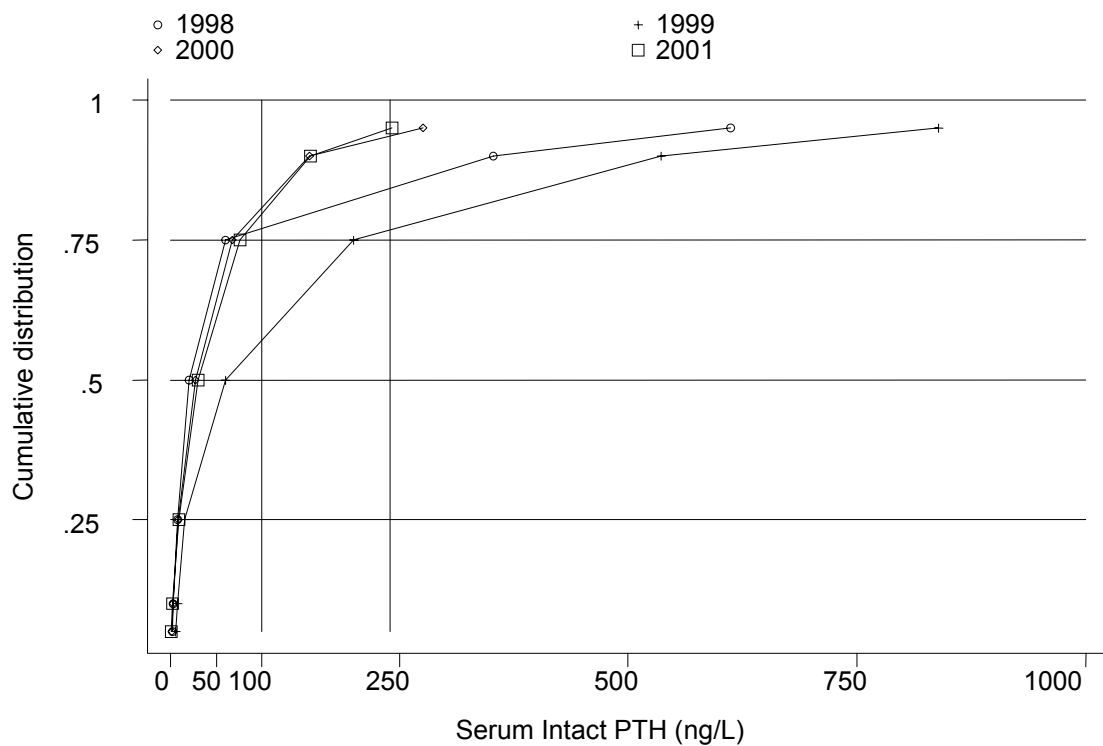
Figure 3.2.30: Cumulative distribution of serum Calcium by year



**Table 3.2.31: Distribution of serum iPTH (ng/L), HD patients, NGO Centres
1998 – 2001**

year	No of subjects	No of observations	median	LQ	UQ	% patients ≥ 100 & ≤ 250 ng/l
1998	175	190	20	8	60	6
1999	277	325	60.1	15.1	200	18
2000	628	844	27	8.3	67.7	10
2001	918	1235	29.8	8.9	76.2	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 1998 – 2001

Year	No.	% on anti-hypertensives	% on 1 anti-hypertensives	% on 2 anti-hypertensives	% on 3 anti-hypertensives
1998	430	63	34	21	7
1999	726	69	39	21	9
2000	1533	67	39	21	6
2001	1828	66	38	22	6

Table 3.2.33: Distribution of Systolic BP without anti-hypertensives, HD patients, NGO Centres 1998 – 2001

year	No of subjects	No of observations	median	LQ	UQ	% patients < 160 mmHg
1998	158	1620	140	125	157	77
1999	225	2313	142	125	160	74
2000	497	5010	140	123	159	76
2001	605	6127	140	121	156	78

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

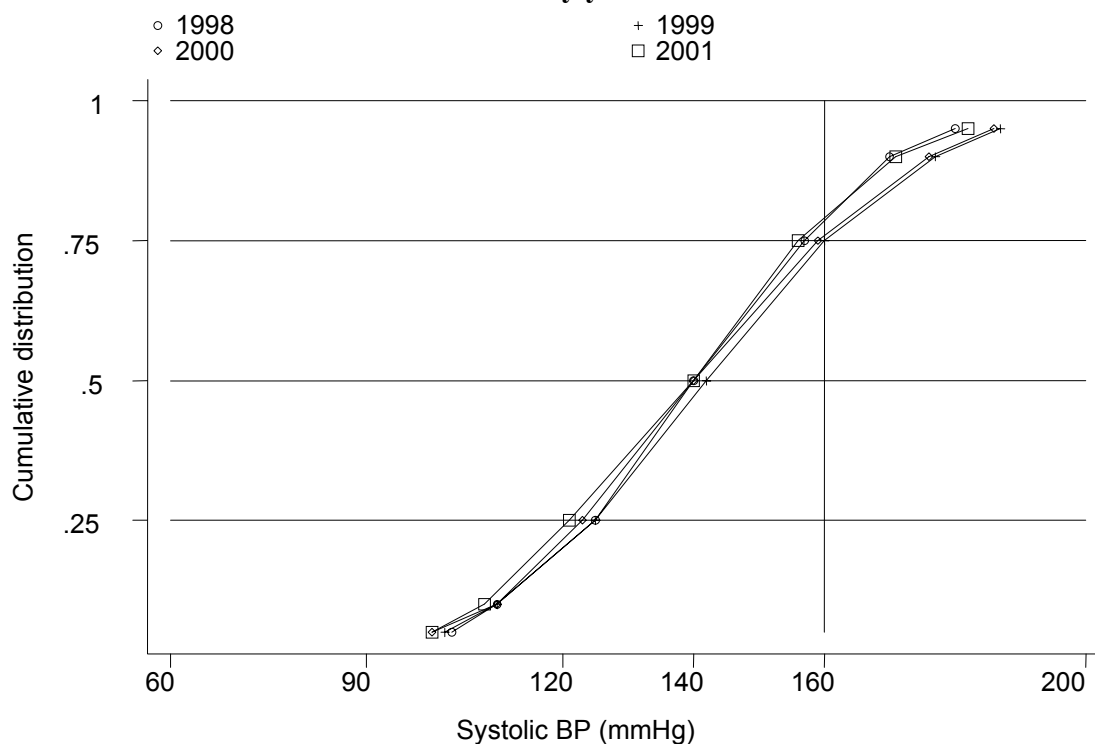


Table 3.2.34: Distribution of Diastolic BP without anti-hypertensives, HD patients, NGO Centres 1998 – 2001

Year	No of subjects	No of observations	median	LQ	UQ	% patients < 90 mmHg
1998	158	1621	80	70	90	74
1999	225	2310	80	70	90	72
2000	497	5010	80	70	88	77
2001	605	6127	80	70	86	80

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

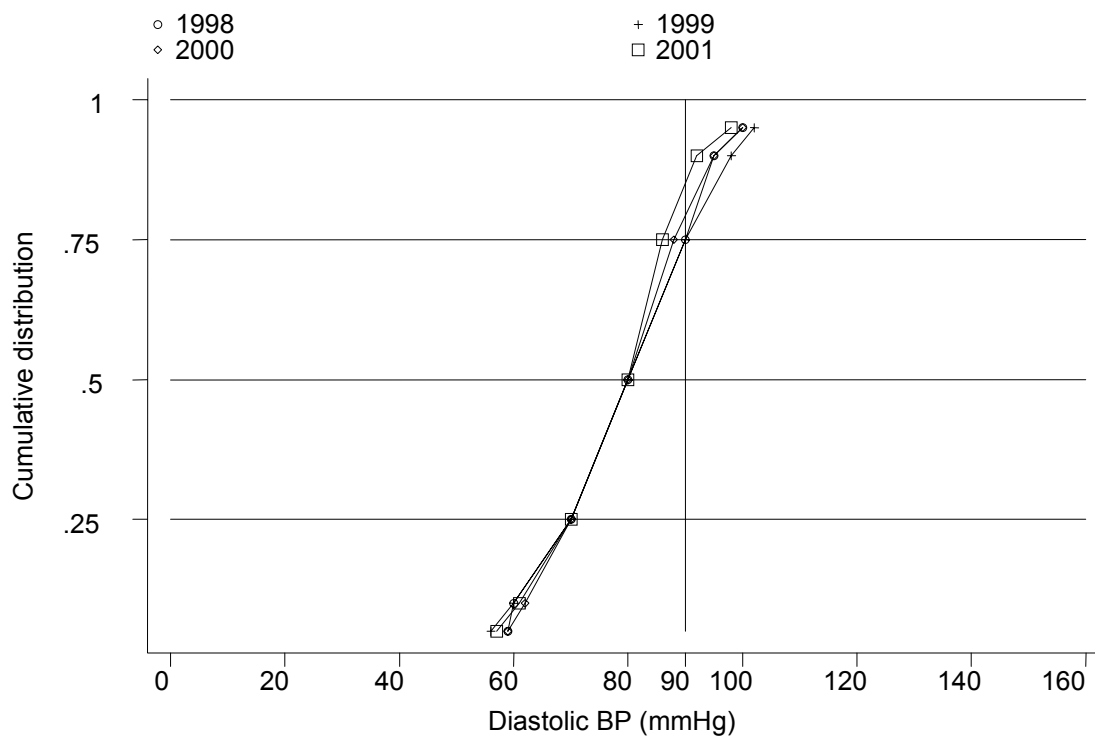


Table 3.2.35: Distribution of systolic BP on anti-hypertensives, HD patients, NGO Centres 1998 – 2001

Year	No of subjects	No of observations	median	LQ	UQ	% patients < 160 mmHg
1998	260	2555	156	140	172	54
1999	498	4864	160	141	178	49
2000	997	9884	153	140	171	56
2001	1210	12184	154	139	171	56

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

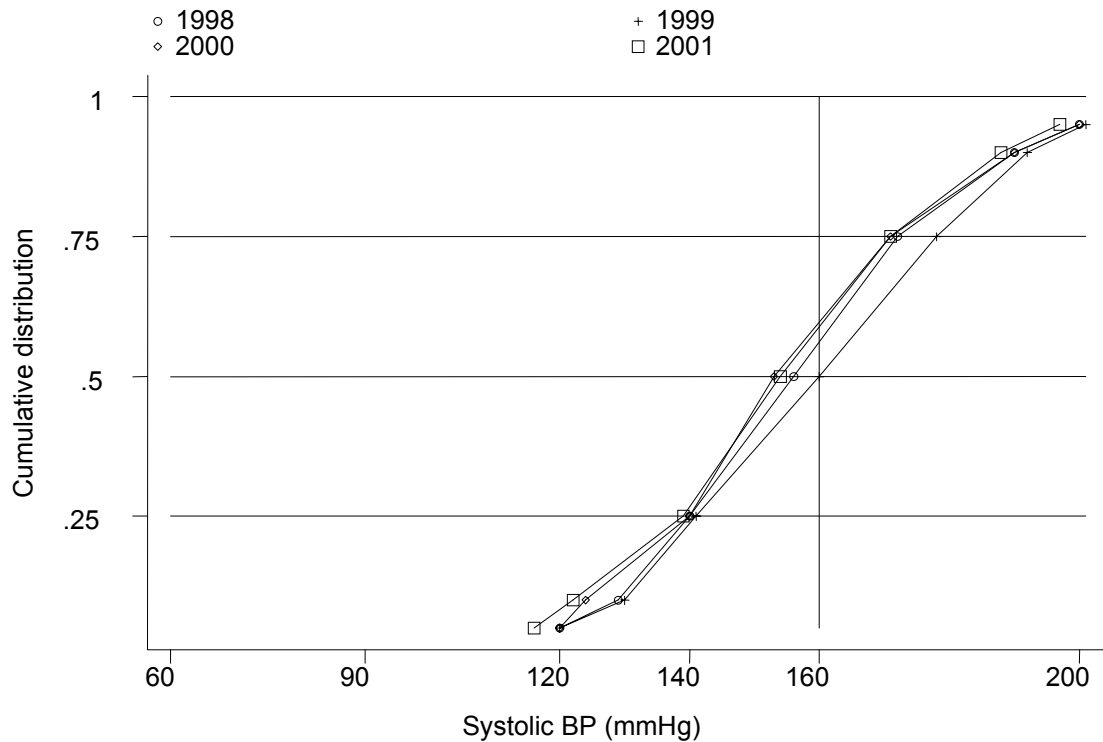
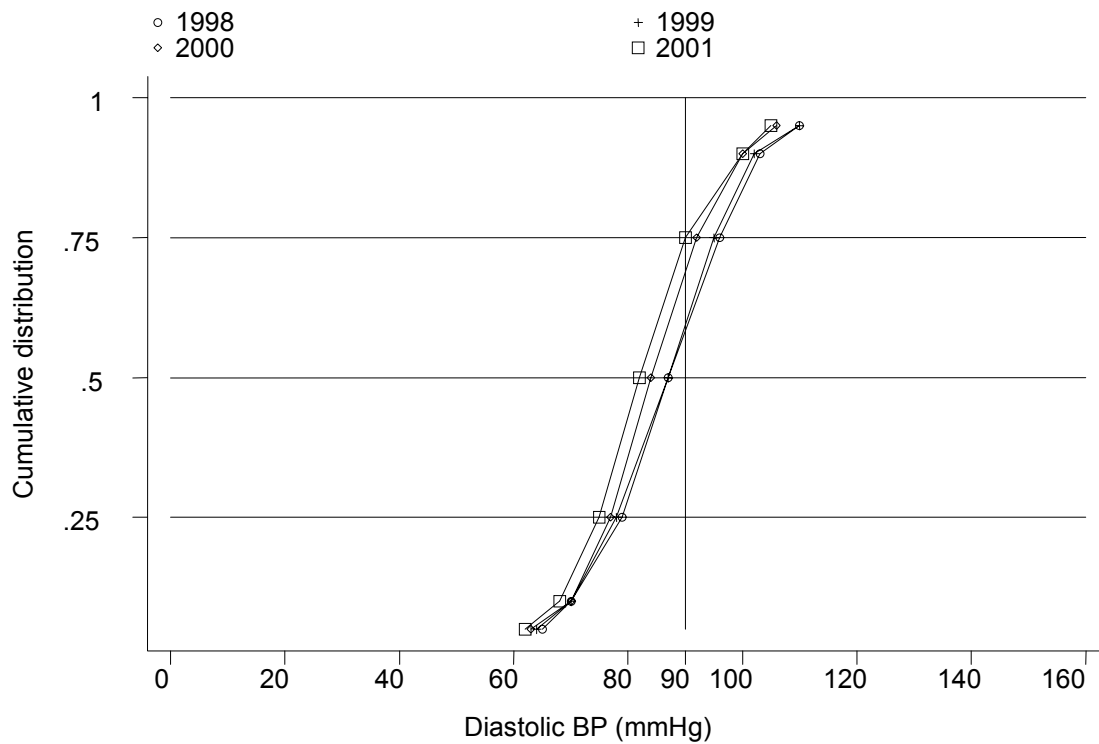


Table 3.2.36: Distribution of diastolic BP on anti-hypertensives, HD patients, NGO Centres 1998 – 2001

year	No of subjects	No of observations	median	LQ	UQ	% patients < 90 mmHg
1998	32	47	2.6	1.4	3.3	96
1999	37	47	2.8	2.4	3.5	94
2000	448	638	2.9	2.2	3.6	96
2001	744	993	2.9	2.3	3.7	96

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 1998 – 2001

year	No	% on rHuEpo	% received blood transfusion	% received oral iron	% received parenteral iron
1998	430	50	7	92	1
1999	726	54	9	87	1
2000	1533	56	12	88	3
2001	1828	62	12	89	3

Table 3.2.38: Distribution of rHuEpo dose per week, HD patients, NGO Centres 1998 – 2001

Year	1998	1999	2000	2001
No. of patients	207	380	821	1105
% on 2000 u/week	60	67	57	54
% on 2-4000 u/week	33	27	38	39
% on 4-6000 u/week	4	4	4	5
% on 6-8000 u/week	2	1	1	1
% on 8-12000 u/week	0	1	0	0
% on >12000 u/week	0	0	0	0

Table 3.2.39: Distribution of serum Iron without rHuEpo, HD patients, NGO Centres 1998 – 2001

Year	No of subjects	No of observations	median	LQ	UQ	% patients > 10 umol/l
1998	28	71	15	10	22.9	69
1999	32	81	14	11	17	83
2000	194	324	15.6	10.4	26	77
2001	285	448	14.9	10.5	22.9	77

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

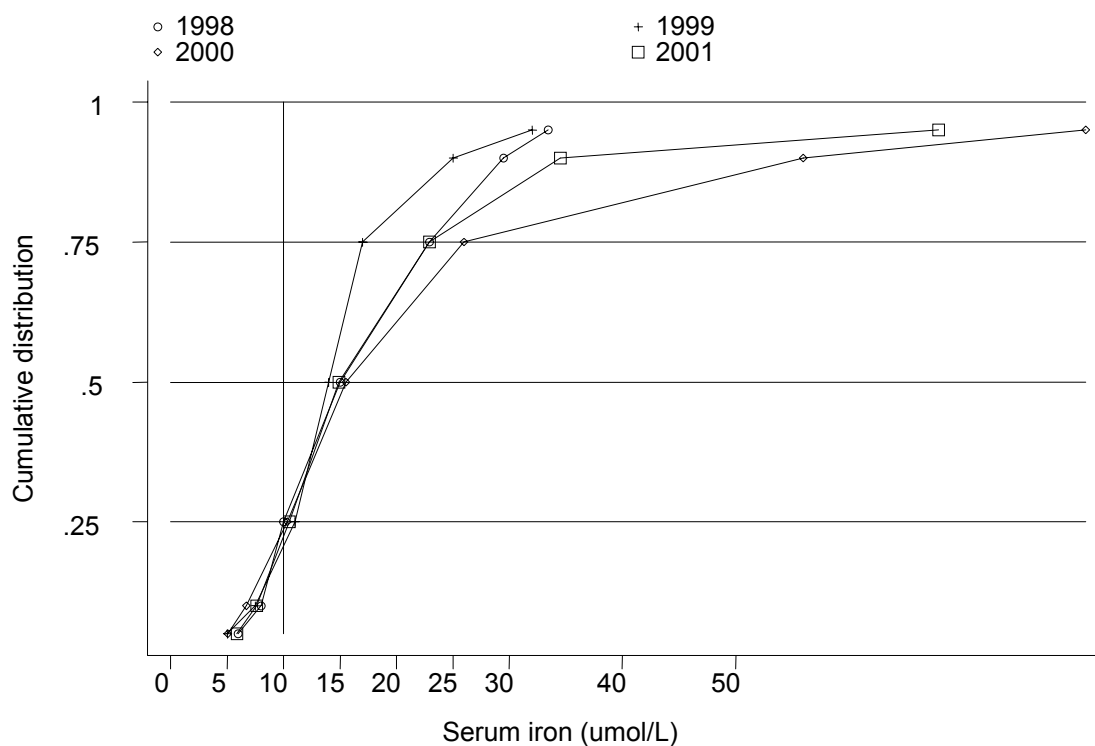


Table 3.2.40: Distribution of serum Iron on rHuEpo,HD patients, NGO Centres 1998 – 2001

Year	No of subjects	No of observations	median	LQ	UQ	% patients > 10 $\mu\text{mol/l}$
1998	50	127	14.3	10	21.7	74
1999	46	123	15.1	11	23.3	78
2000	383	743	14.7	10.5	21	76
2001	545	966	13.3	9.7	19.4	71

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

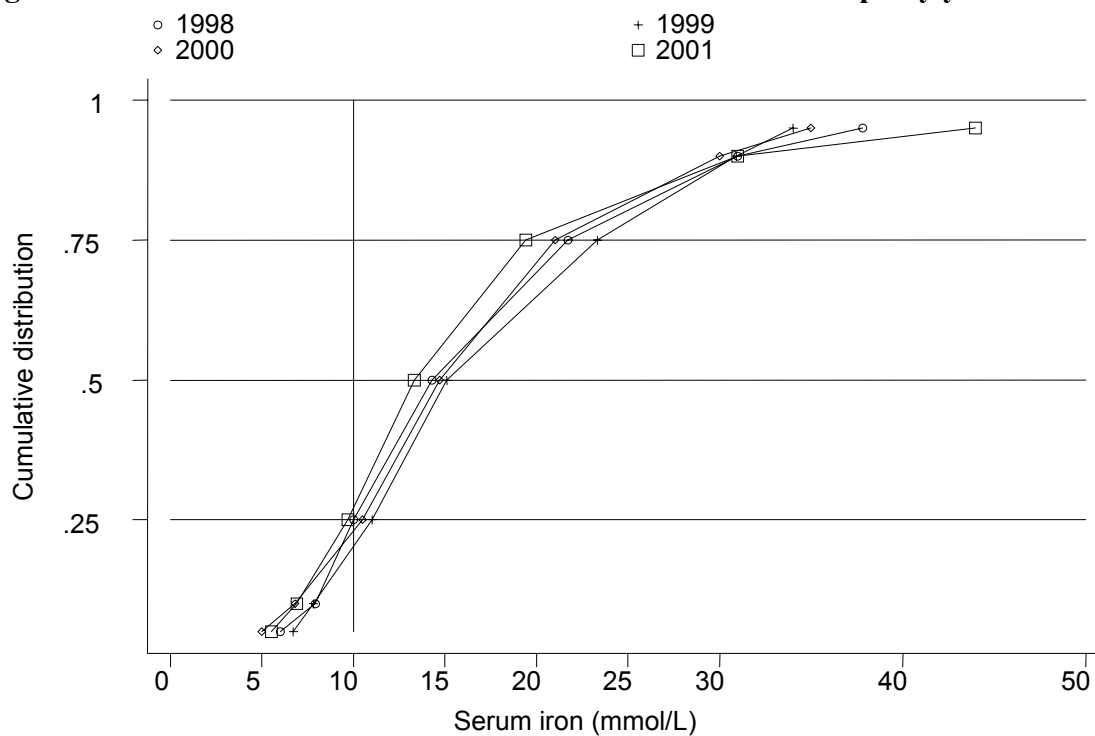


Table 3.2.41: Distribution of serum Transferrin Saturation without rHuEpo, HD patients, NGO Centres 1998 – 2001

Year	No of subjects	No of observations	median	LQ	UQ	% patients > 20%
1998	23	92	25	20.7	43.4	78
1999	23	92	26.9	20.7	41	83
2000	140	560	28.4	18.7	44.8	71
2001	198	792	32.1	22.7	48.9	79

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

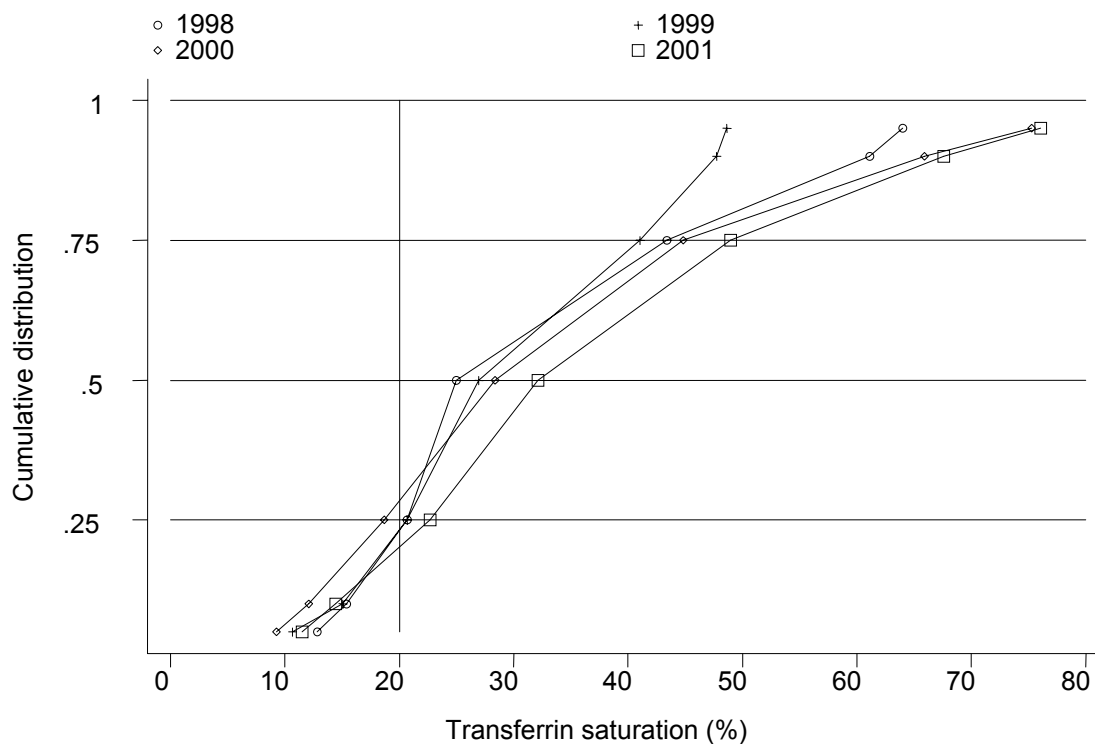


Table 3.2.42: Distribution of serum Transferrin Saturation on rHuEpo, HD patients, NGO Centres 1998 – 2001

Year	No of subjects	No of observations	median	LQ	UQ	% patients > 20%
1998	30	120	23.7	16.7	38.7	57
1999	34	136	30.5	20	43.2	74
2000	293	1172	31.3	21.1	45.3	77
2001	409	1636	29.9	21.5	41.4	78

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

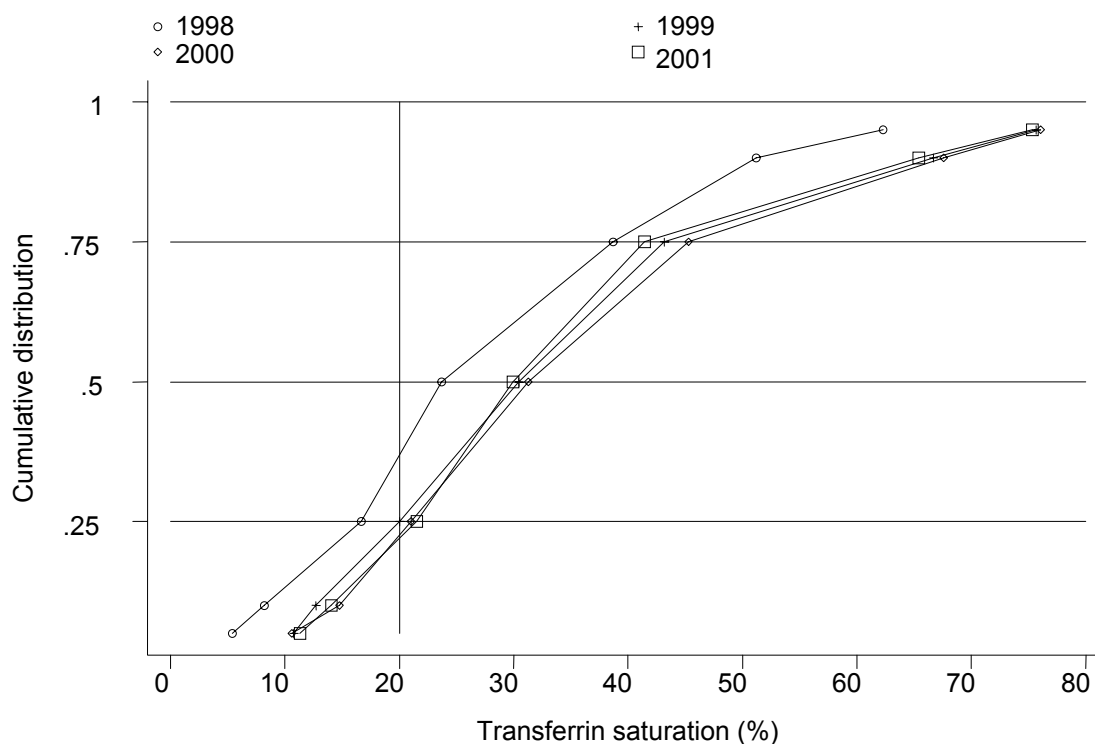


Table 3.2.43: Distribution of serum Ferritin without rHuEpo, HD patients, NGO Centres 1998 – 2001

year	No of subjects	No of observations	median	LQ	UQ	% patients > 100 ug/l
1998	29	49	433	212.6	804	92
1999	24	38	505	200	688	87
2000	160	213	439	186	874	88
2001	273	357	426	194	846	87

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

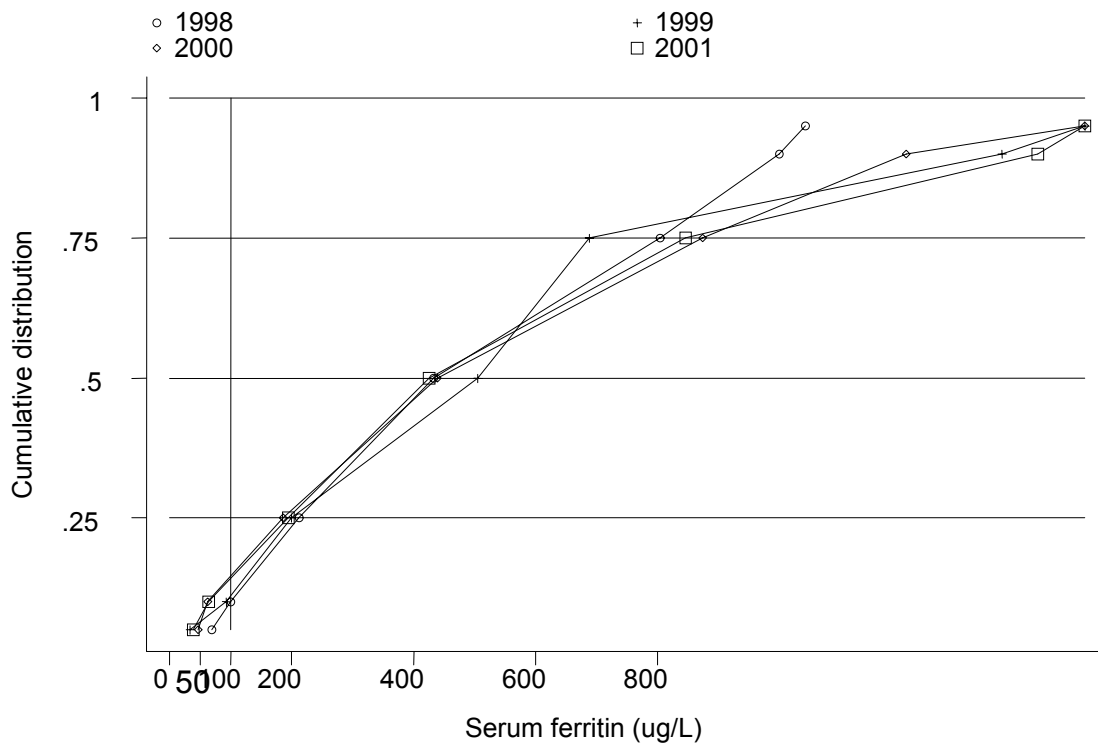


Table 3.2.44: Distribution of serum Ferritin on rHuEpo, HD patients, NGO Centres 1998 – 2001

year	No of subjects	No of observations	median	LQ	UQ	% patients > 100 ug/l
1998	31	51	373.6	226.8	756	94
1999	36	59	382.5	175	1000	93
2000	368	523	514	239	982	90
2001	558	820	486	226	878	91

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

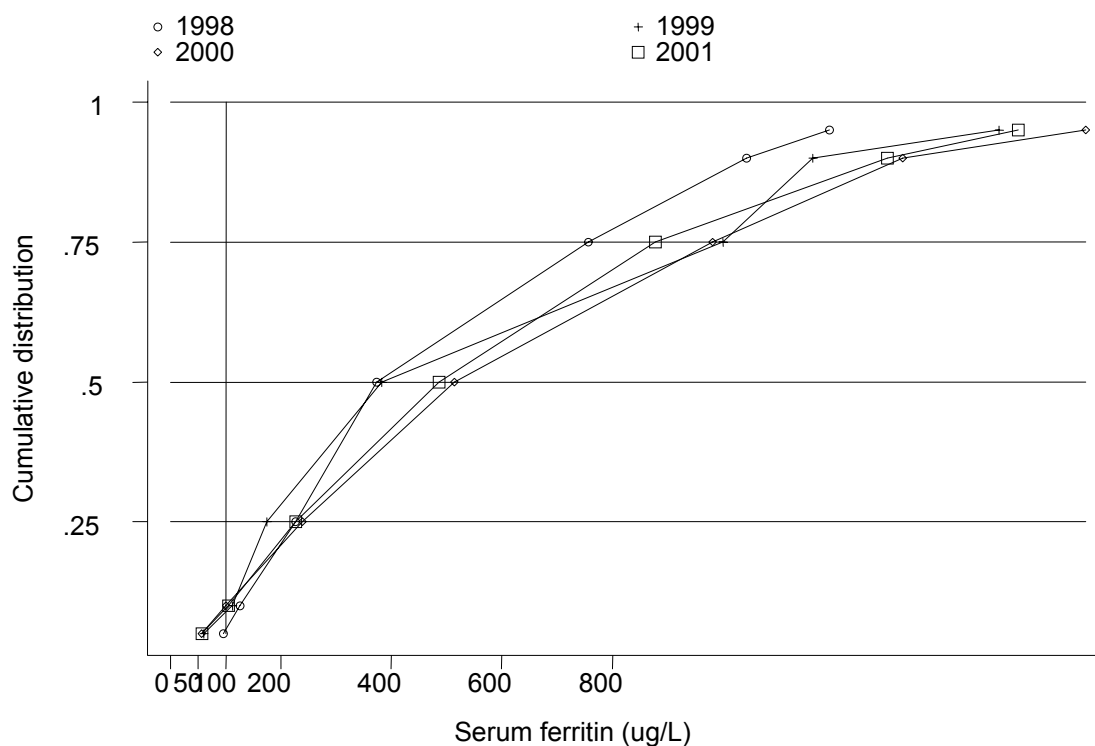


Table 3.2.45: Distribution of Haemoglobin without rHuEpo, HD patients, NGO Centres 1998 – 2001

year	No of subjects	No of observations	median	LQ	UQ	% patients <10 g/dl	% patients ≥ 10 & ≤ 12 g/dl	% patients >12 g/dl
1998	201	566	8.8	7.6	10.3	70	19	10
1999	313	836	9.1	7.9	10.4	66	25	8
2000	573	1462	9.1	7.9	10.9	63	25	12
2001	630	1655	9.3	8	10.6	64	24	11

Figure 3.2.45: Cumulative Distribution of Haemoglobin without rHuEpo by year

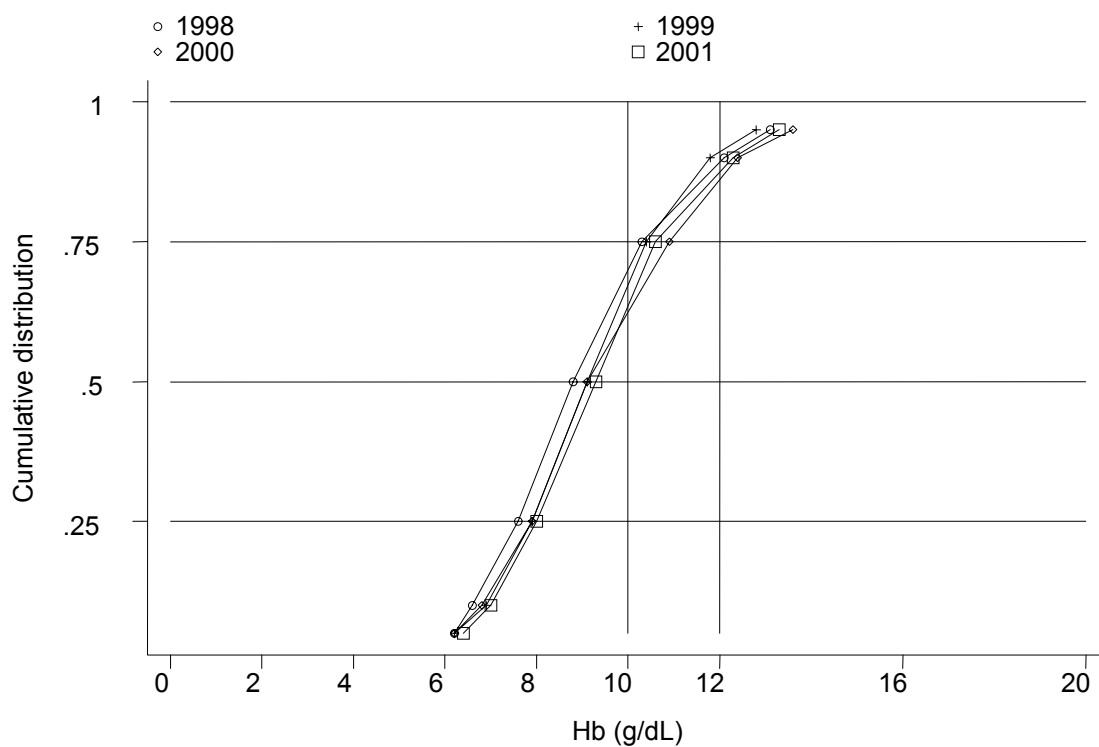
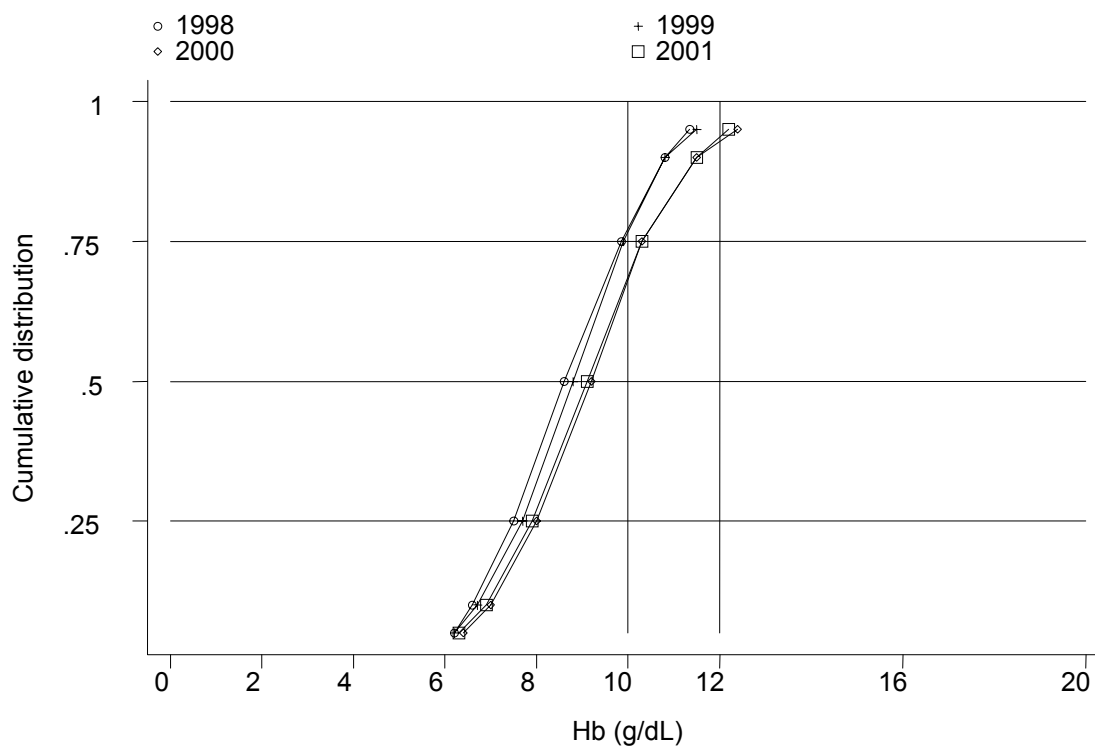


Table 3.2.46: Distribution of Haemoglobin on rHuEpo, HD patients, NGO Centres 1998 – 2001

Year	No of subjects	No of observations	median	LQ	UQ	% patients <10 g/dl	% patients ≥ 10 & ≤ 12 g/dl	% patients >12 g/dl
1998	207	600	8.6	7.5	9.8	78	19	3
1999	381	1123	8.8	7.7	9.9	76	22	3
2000	766	2187	9.2	8	10.3	67	27	6
2001	1071	3247	9.1	7.9	10.3	67	27	6

Figure 3.2.46: Cumulative distribution of Haemoglobin on rHuEpo by year

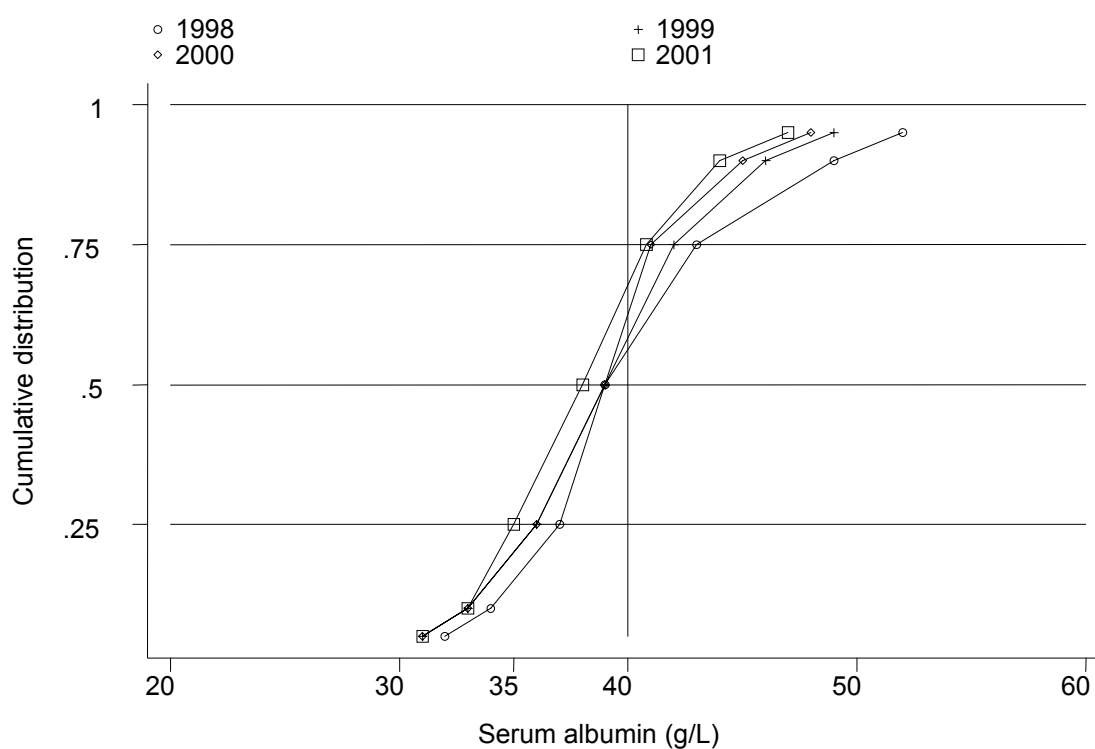


3.2.13 NUTRITIONAL STATUS OF HD PATIENTS, NGO CENTRES

Table 3.2.47: Distribution of serum Albumin (g/L), HD patients, NGO Centres 1998 – 2001

year	No of subjects	No of observations	median	LQ	UQ	% patients >40g/l
1998	401	1065	39	37	43	48
1999	645	1471	39	36	42	44
2000	1225	3310	39	36	41	40
2001	1660	4478	38	35	40.8	33

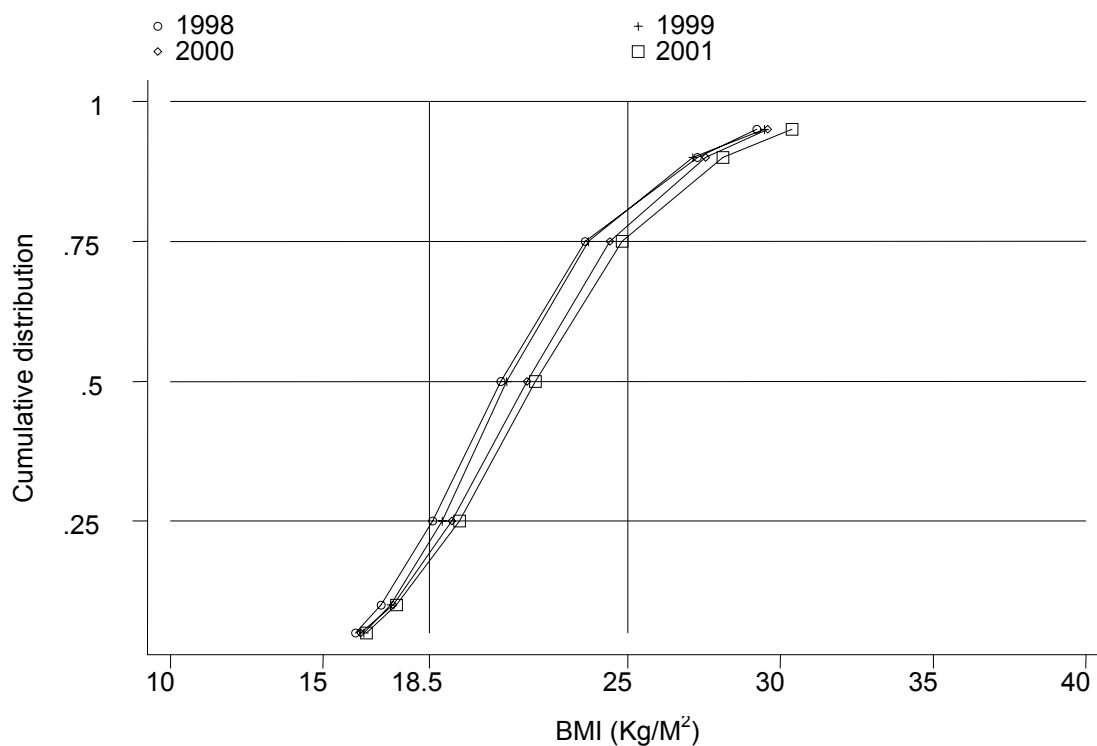
Figure 3.2.47: Cumulative distribution of serum Albumin by year



**Table 3.2.48: Distribution of Body Mass Index, HD patients, NGO Centres
1998 – 2001**

Year	No of subjects	No of observations	median	LQ	UQ	% patients <18.5	% patients ≥ 18.5 & ≤ 25	% patients >25
1998	326	3279	20.8	18.6	23.6	24	59	17
1999	602	5894	21	18.9	23.7	20	63	17
2000	1212	12031	21.7	19.2	24.4	19	59	22
2001	1490	14988	22	19.5	24.8	17	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 1998 – 2001

Year	No	% HBsAg positive	% anti-HCV positive
1998	430	9	23
1999	726	7	18
2000	1533	6	20
2001	1828	6	18

Figure 3.2.49: Prevalence of positive anti-HCV and HbsAg HD patients, NGO Centres 1998 – 2001

