

**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

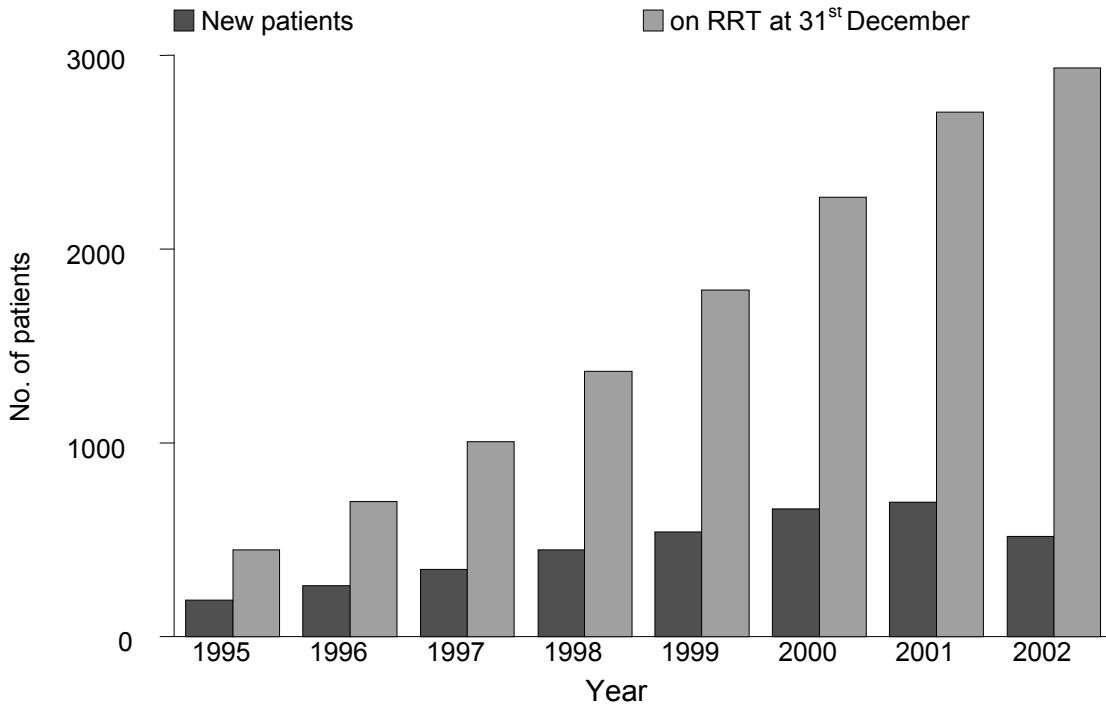
## 3.2 HAEMODIALYSIS IN NON-GOVERNMENTAL ORGANISATION (NGO) CENTRES

### 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 <sup>st</sup> December | 448  | 698  | 1007 | 1368 | 1788 | 2267 | 2705 | 2932 |

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

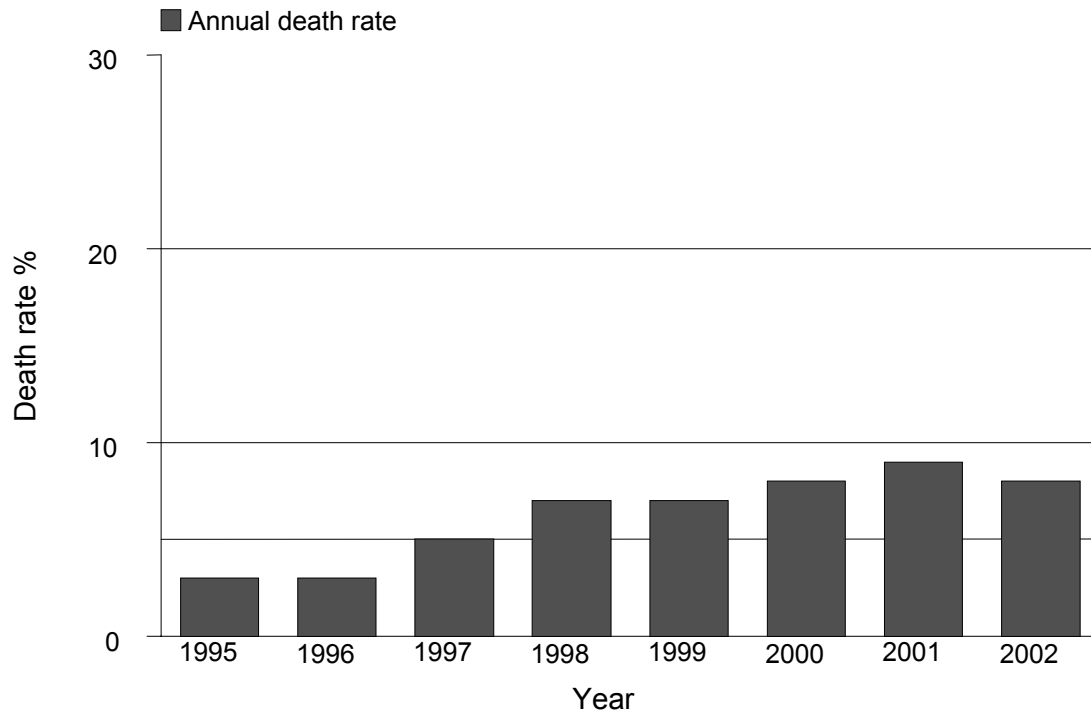


### 3.2.3 DEATH ON HAEMODIALYSIS, NGO CENTRES

**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 <sup>st</sup> 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,<br>Taiping | 29  | 1 |
| 68 | Yayasan Hemodialisis Kebajikan Southern Melaka                | 59  | 2 |
| 69 | Yayasan Kebajikan SSL Heamodialisis                           | 116 | 4 |

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### 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 <sup>st</sup> 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**

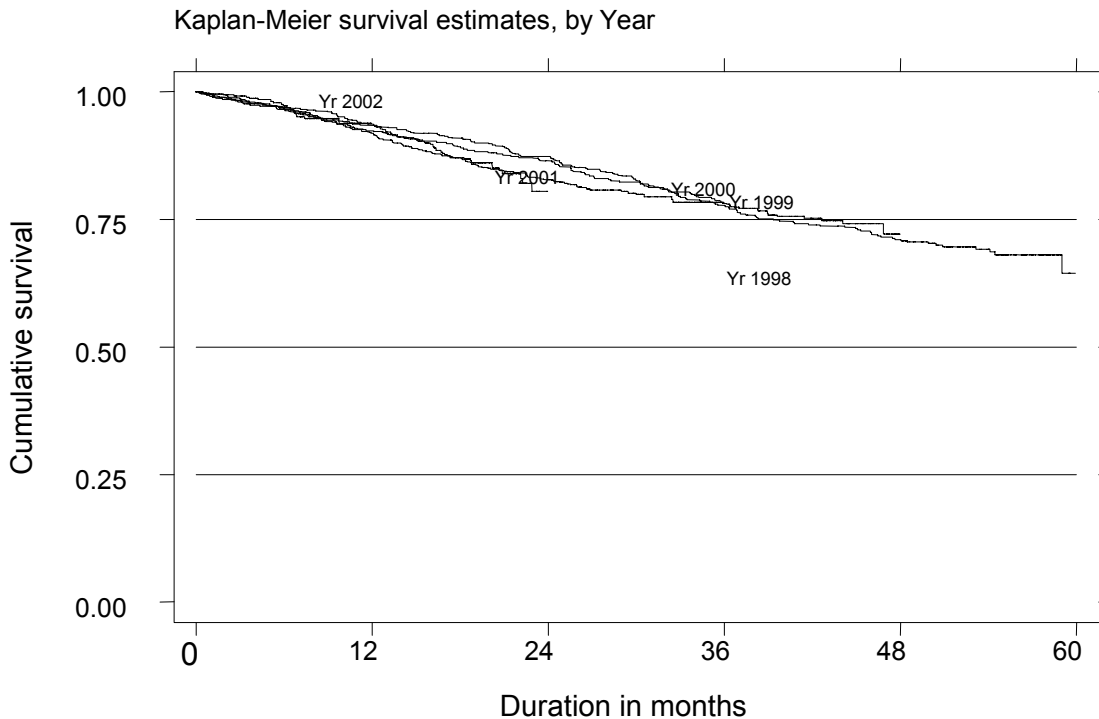
| Year              | 1997       |    |     | 1998       |    |     | 1999       |    |     |
|-------------------|------------|----|-----|------------|----|-----|------------|----|-----|
| Interval (months) | % survival | SE | No  | % survival | SE | No  | % survival | SE | No  |
| 6                 | 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 |            |    |     |            |    |     |

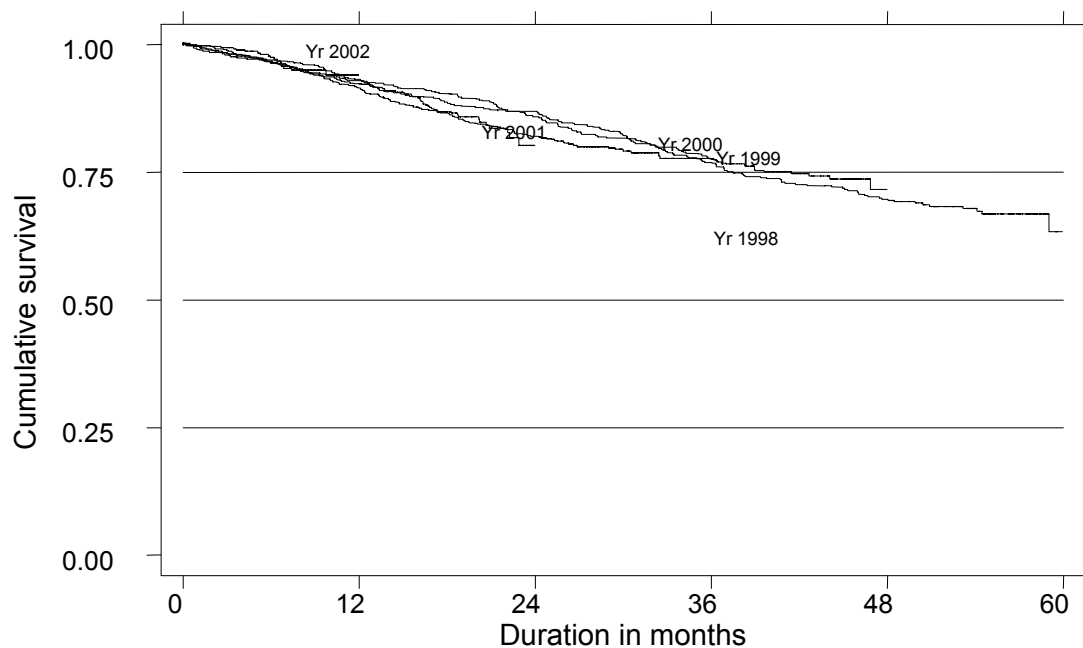
| Year              | 2000       |    |     | 2001       |    |     | 2002       |    |     |
|-------------------|------------|----|-----|------------|----|-----|------------|----|-----|
| Interval (months) | % survival | SE | No  | % survival | SE | No  | % survival | SE | No  |
| 6                 | 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<br>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         |
| <b>Total</b>                                      | <b>661</b> | <b>100</b> | <b>1197</b> | <b>100</b> | <b>1630</b> | <b>100</b> | <b>1978</b> | <b>100</b> |

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

| QOL Index<br>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          |
| <b>Total</b>     | <b>723</b> | <b>100</b> | <b>1510</b> | <b>100</b> | <b>1887</b> | <b>100</b> | <b>2199</b> | <b>100</b> |

\* 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         |
| <b>Total</b>                                    | <b>727</b> | <b>100</b> | <b>1517</b> | <b>100</b> | <b>1891</b> | <b>100</b> | <b>2206</b> | <b>100</b> |

**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         |
| <b>Total</b>                             | <b>727</b> | <b>100</b> | <b>1521</b> | <b>100</b> | <b>1892</b> | <b>100</b> | <b>2206</b> | <b>100</b> |

**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          |
| <b>Total</b>     | <b>702</b> | <b>100</b> | <b>1466</b> | <b>100</b> | <b>1821</b> | <b>100</b> | <b>2148</b> | <b>100</b> |

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

| HD sessions<br>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<br>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<br>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

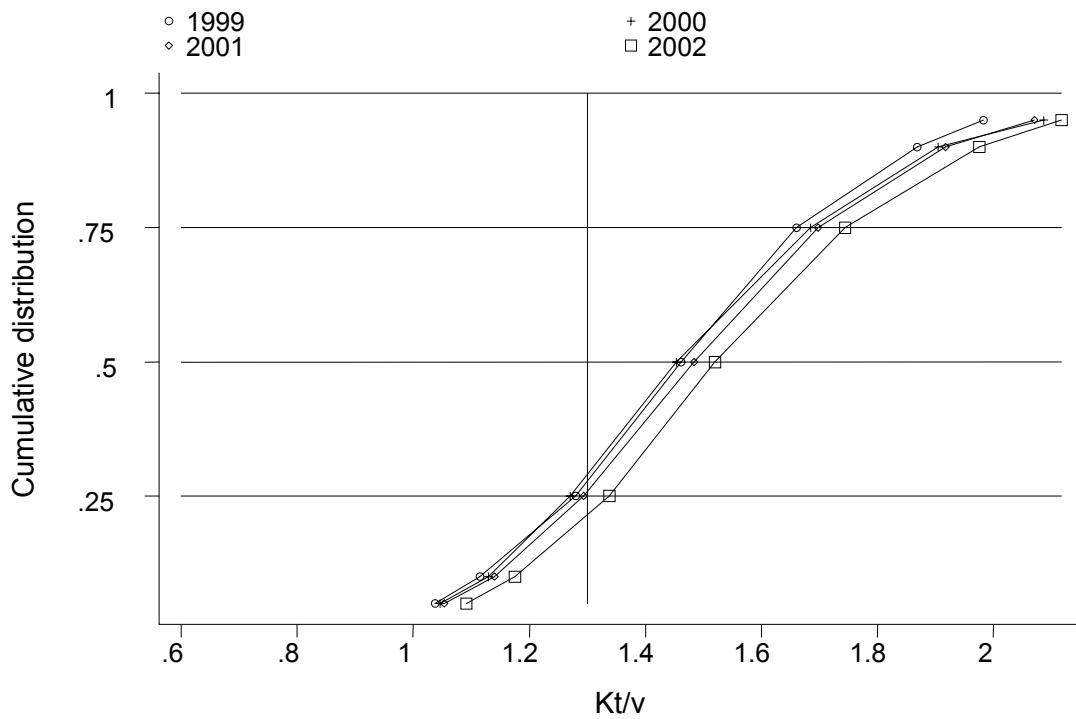
**Table 3.2.22: Dialysate Buffer used in NGO HD Units 1999 – 2002**

| 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**

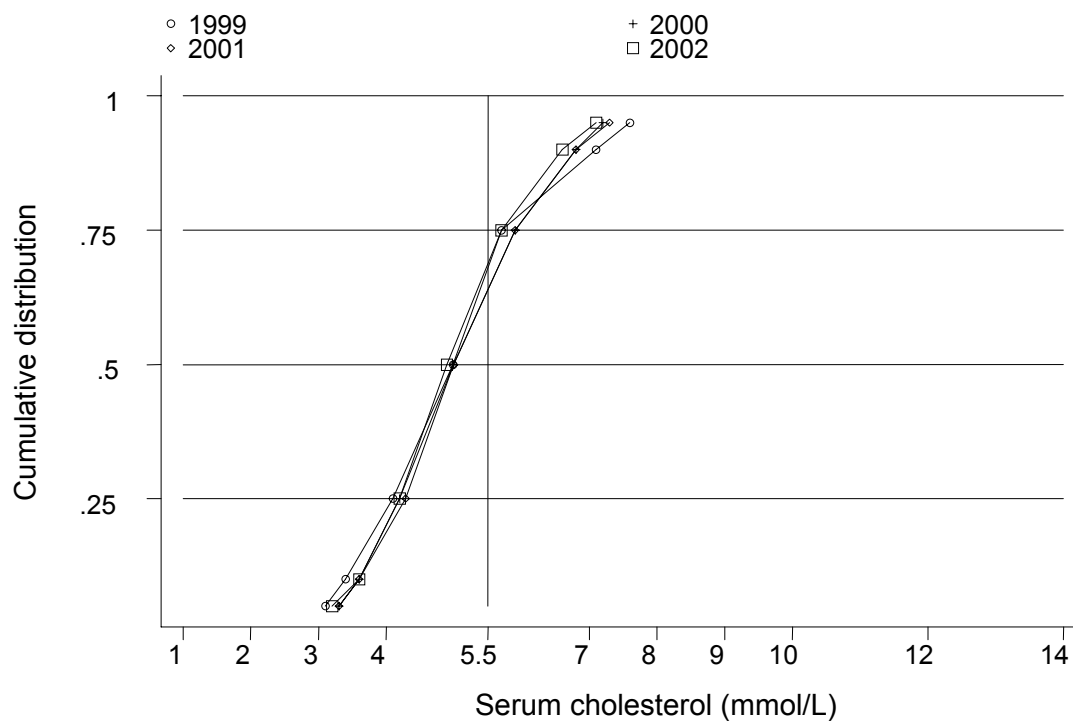


### 3.2.9 DYSLIPIDAEMIA IN HD PATIENTS, NGO CENTRES

**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                      |

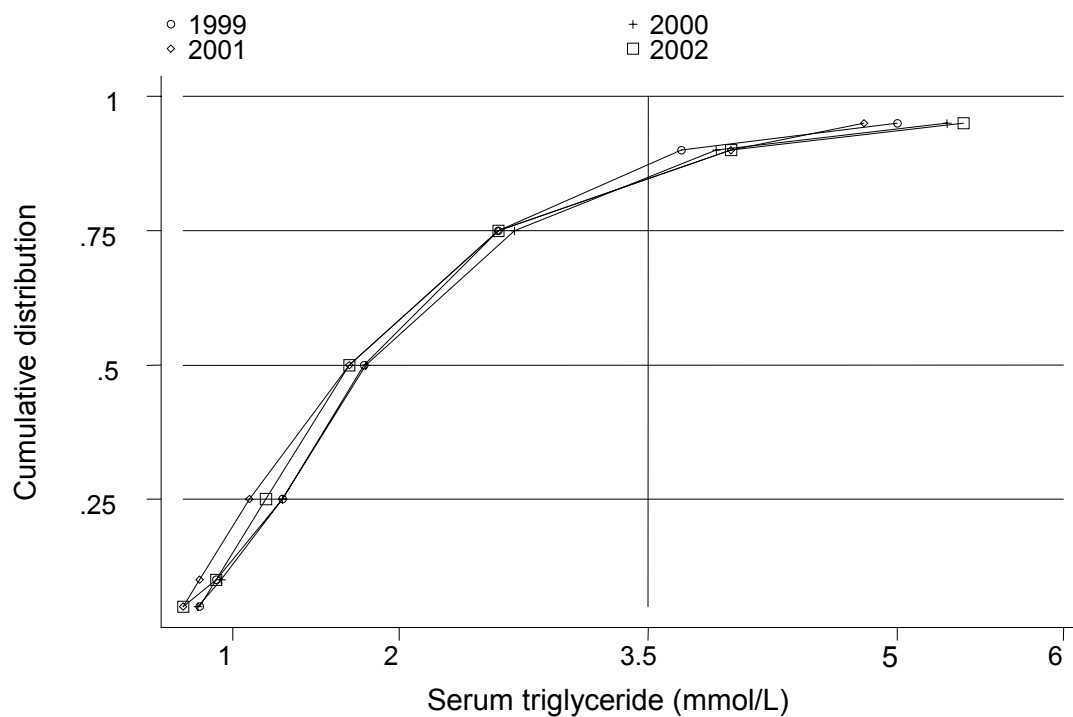
**Figure 3.2.24: Cumulative distribution of serum cholesterol concentration by year**



**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                      |

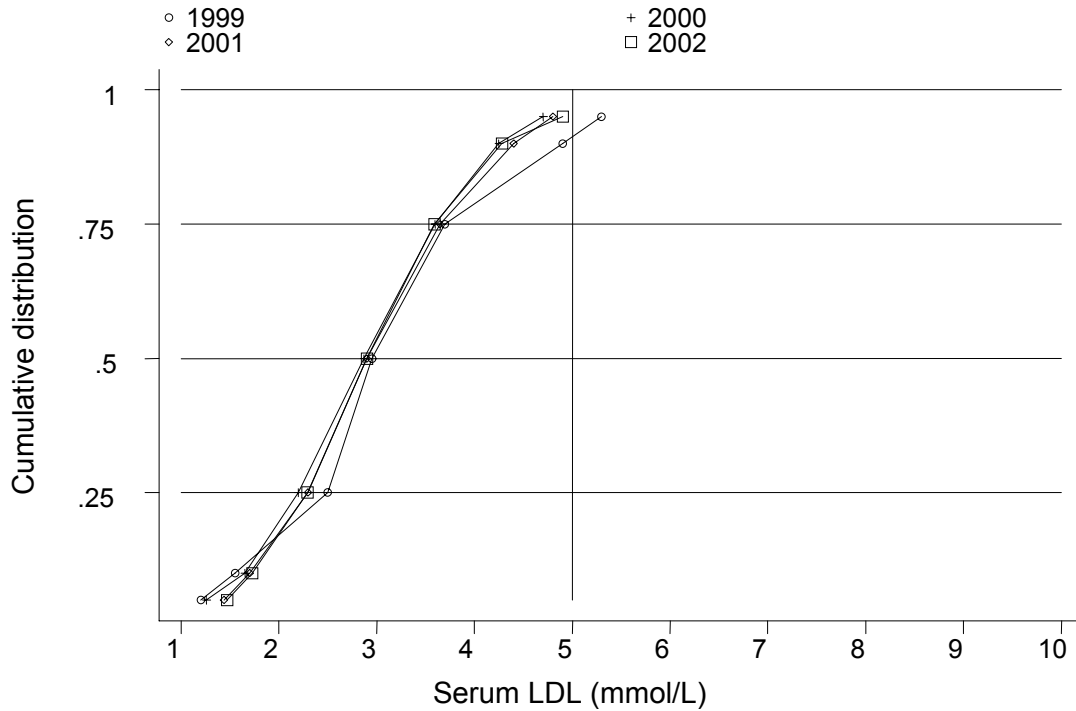
**Figure 3.2.25: Cumulative distribution of serum triglyceride concentration by year**



**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                   |

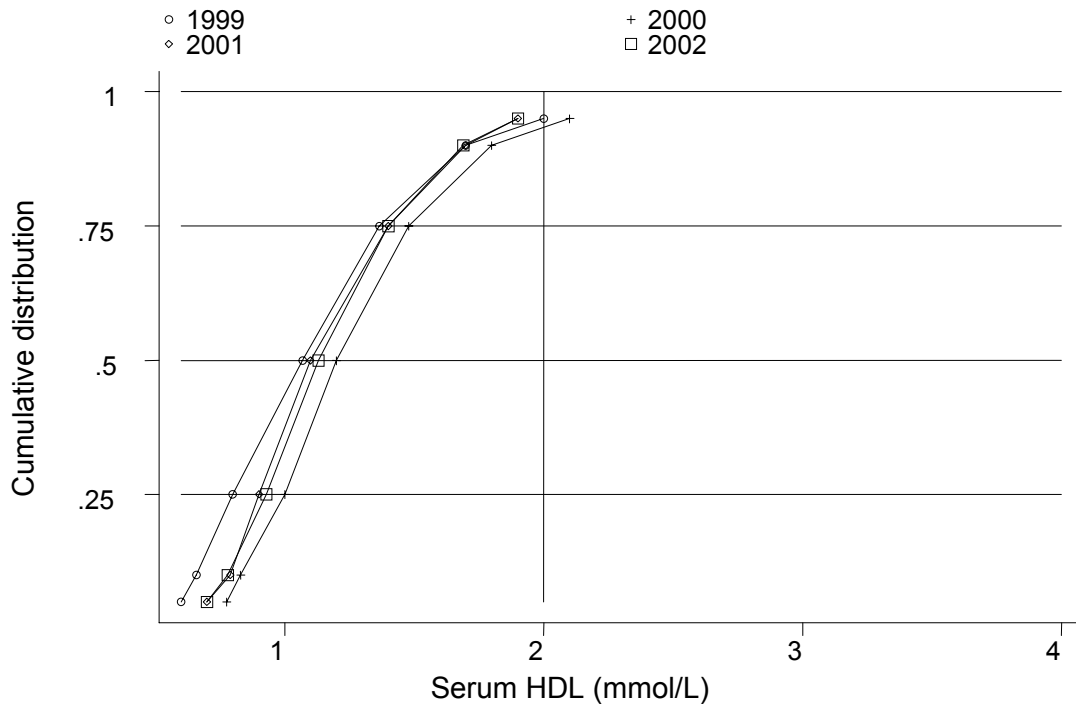
**Figure 3.2.26 : Cumulative distribution of serum LDL by year**



**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

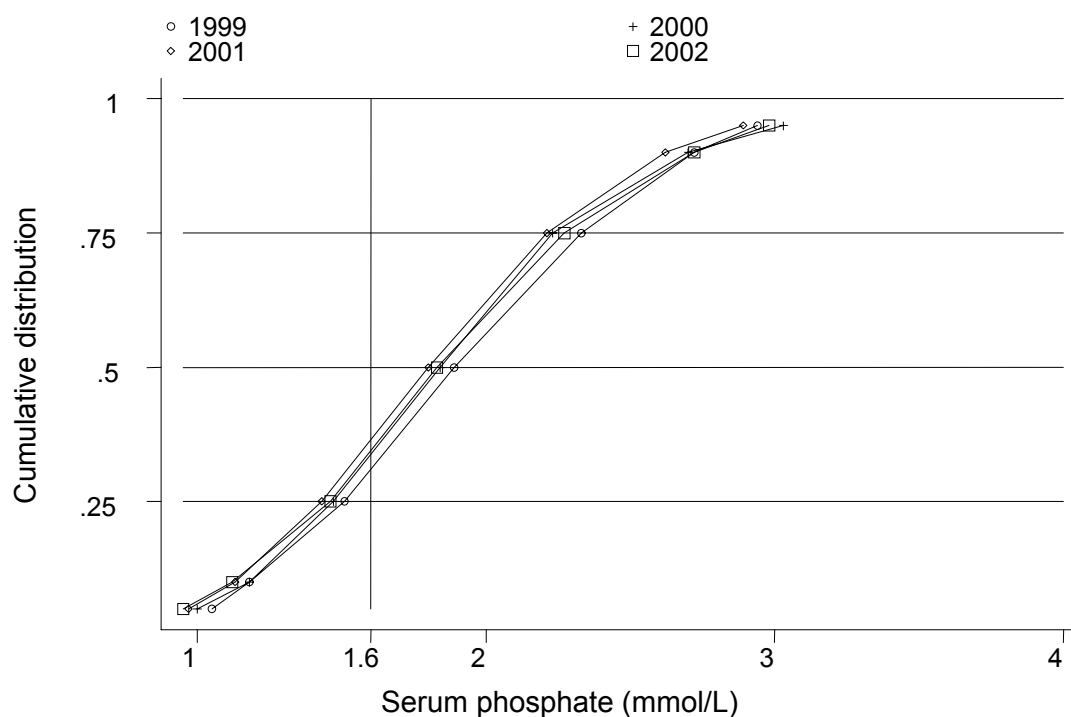
**Table 3.2.28: Treatment for Renal Bone Disease, HD patients, NGO Centres 1999 – 2002**

| Year | No of subjects | % on CaCO <sub>3</sub> | % on Al(OH) <sub>3</sub> | % 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                      |

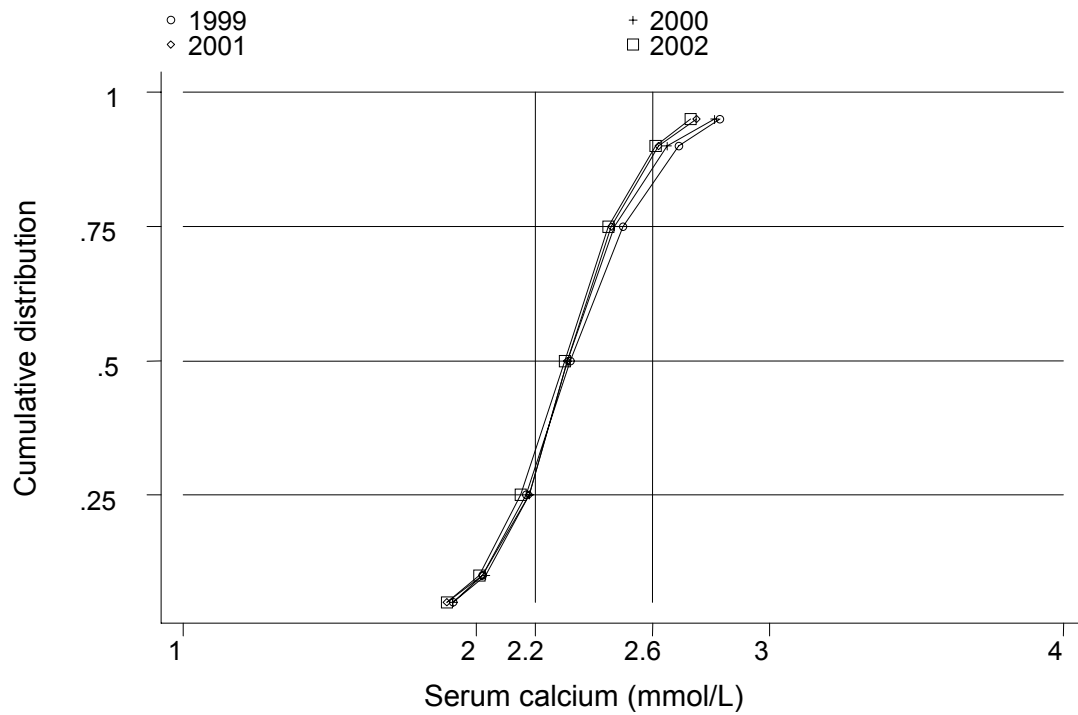
**Figure 3.2.29: Cumulative distribution of serum Phosphate by year**



**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 $\geq 2.2$ & $\leq 2.6$ 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  |

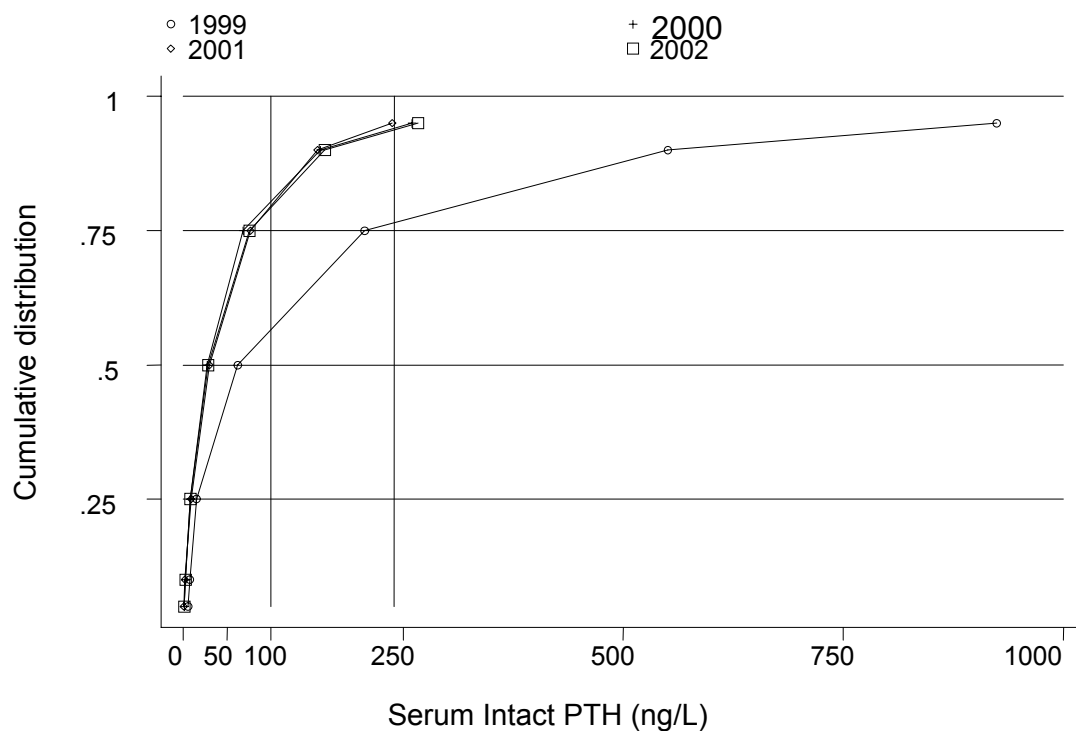
**Figure 3.2.30: Cumulative distribution of serum Calcium by year**



**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 $\geq 100$ & $\leq 250$ 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

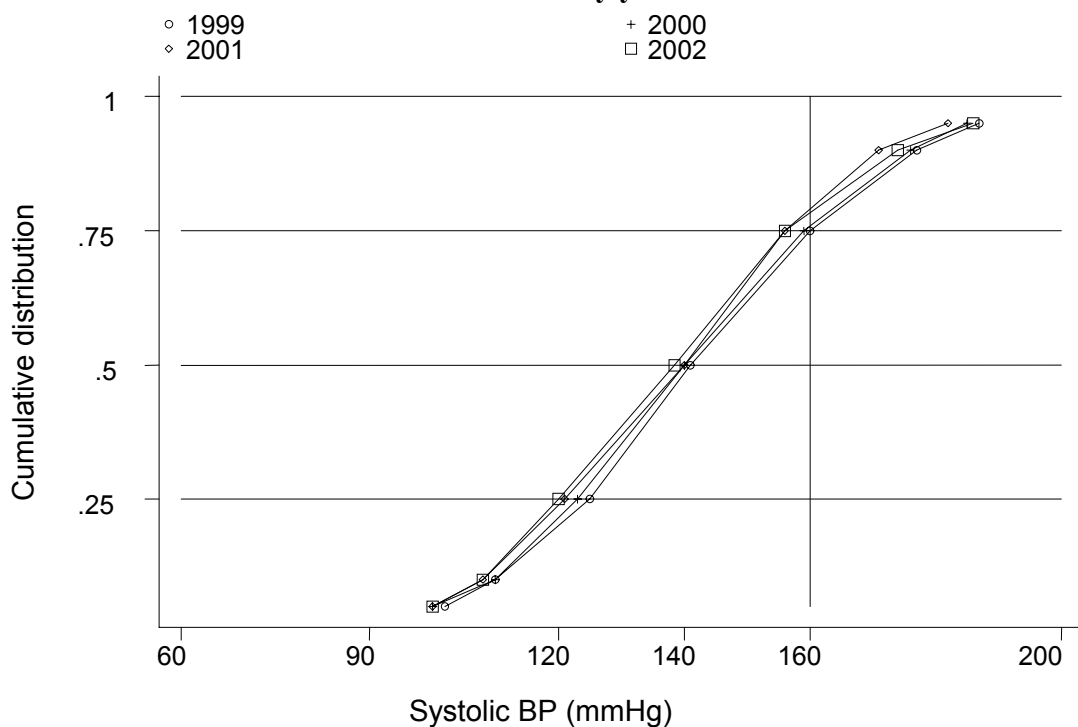
**Table 3.2.32: Treatment for hypertension, HD patients, NGO Centres 1999 – 2002**

| 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                    |

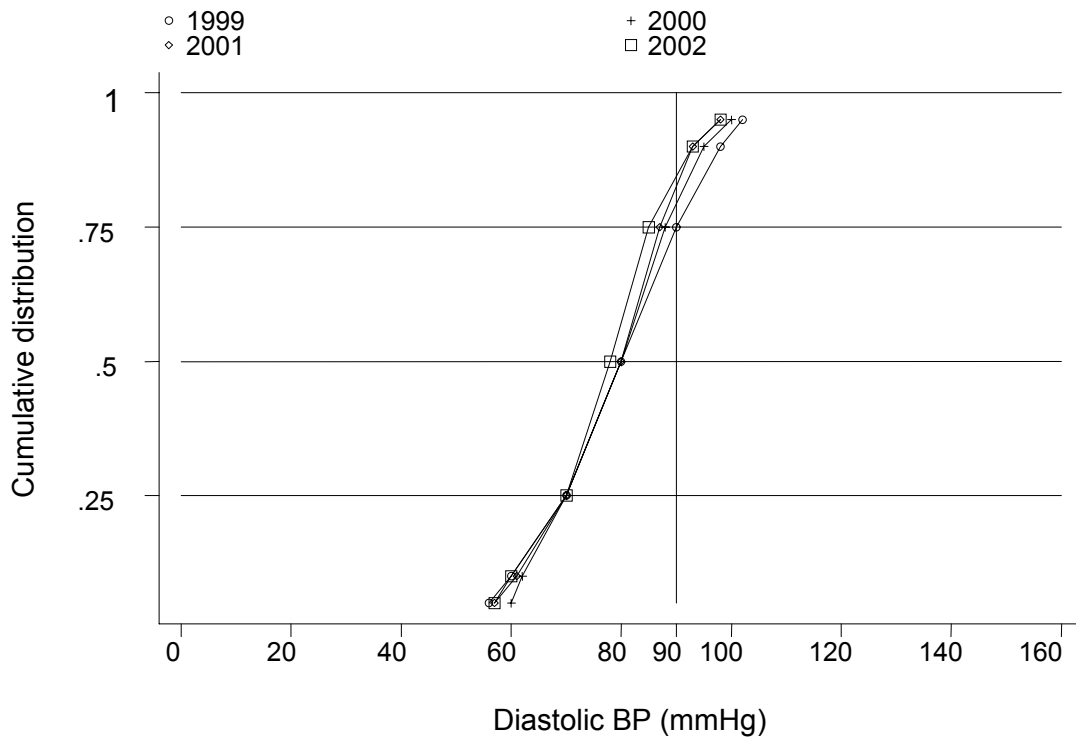
**Figure 3.2.33: Cumulative distribution of Systolic BP without anti-hypertensives by year**



**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                   |

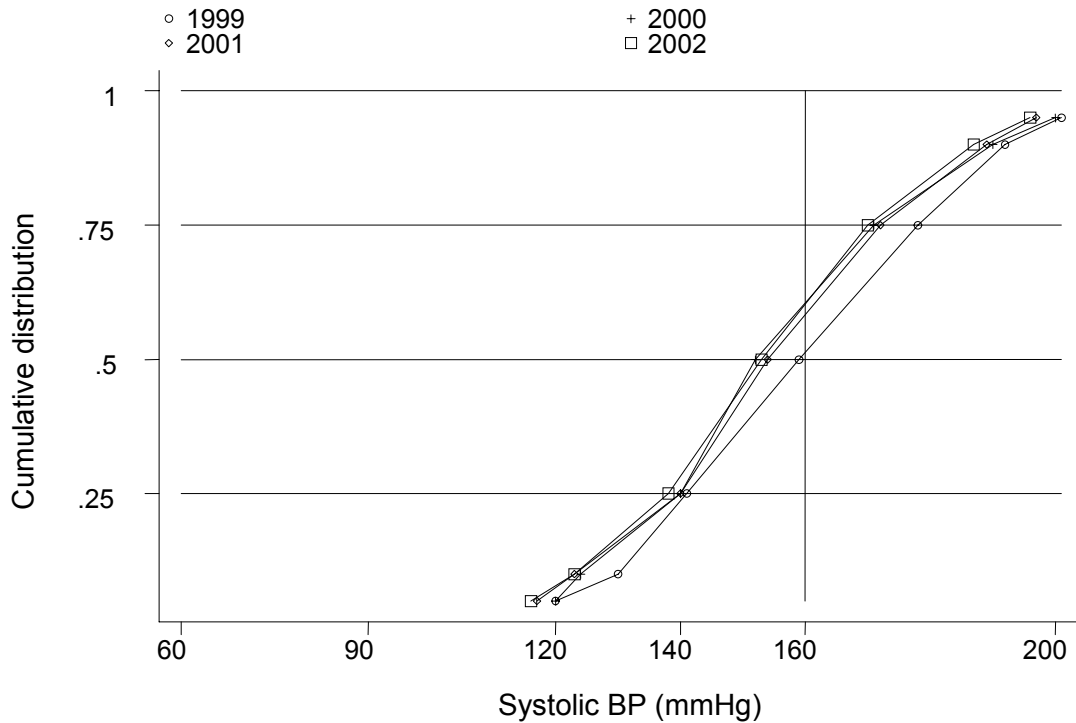
**Figure 3.2.34: Cumulative distribution of Diastolic BP without anti-hypertensives by year**



**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                    |

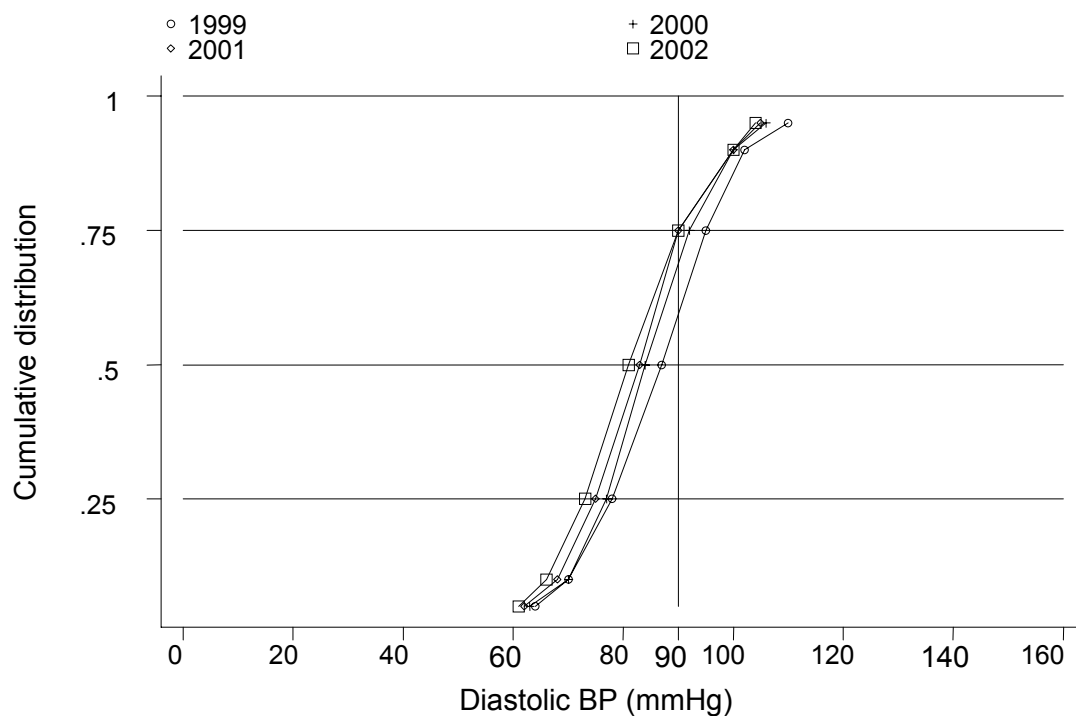
**Figure 3.2.35: Cumulative distribution of systolic BP on anti-hypertensives by year**



**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                          |

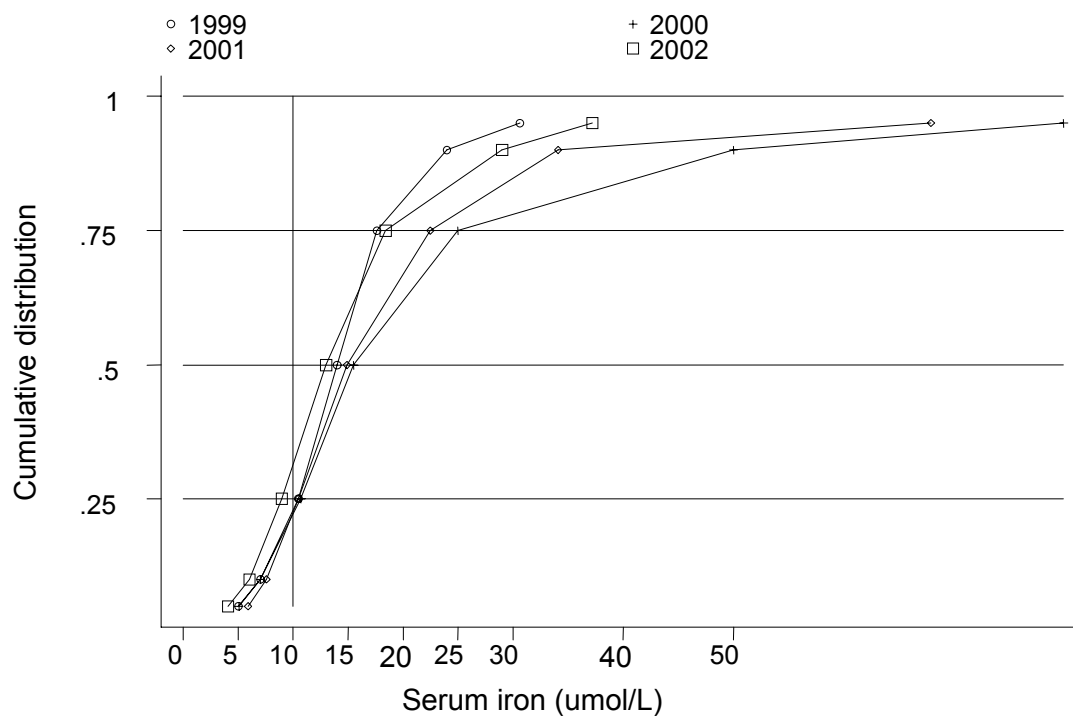
**Table 3.2.38: Distribution of rHuEpo dose per week, HD patients, NGO Centres 1999 – 2002**

| 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                     |

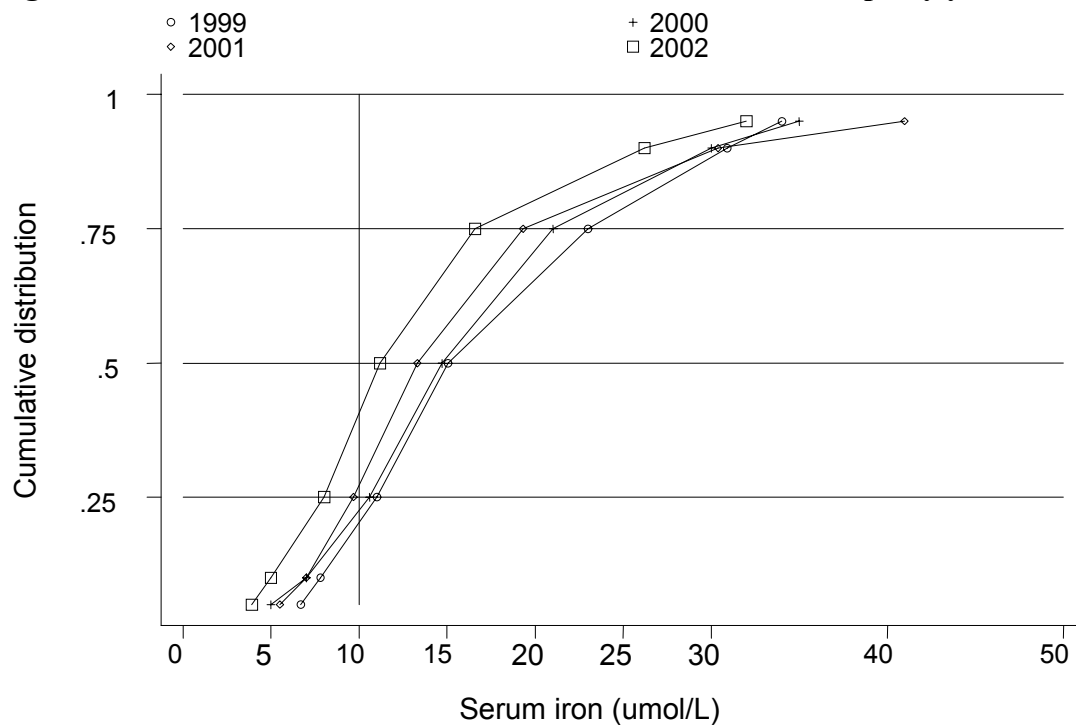
**Figure 3.2.39: Cumulative distribution of serum Iron without rHuEpo by year**



**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                     |

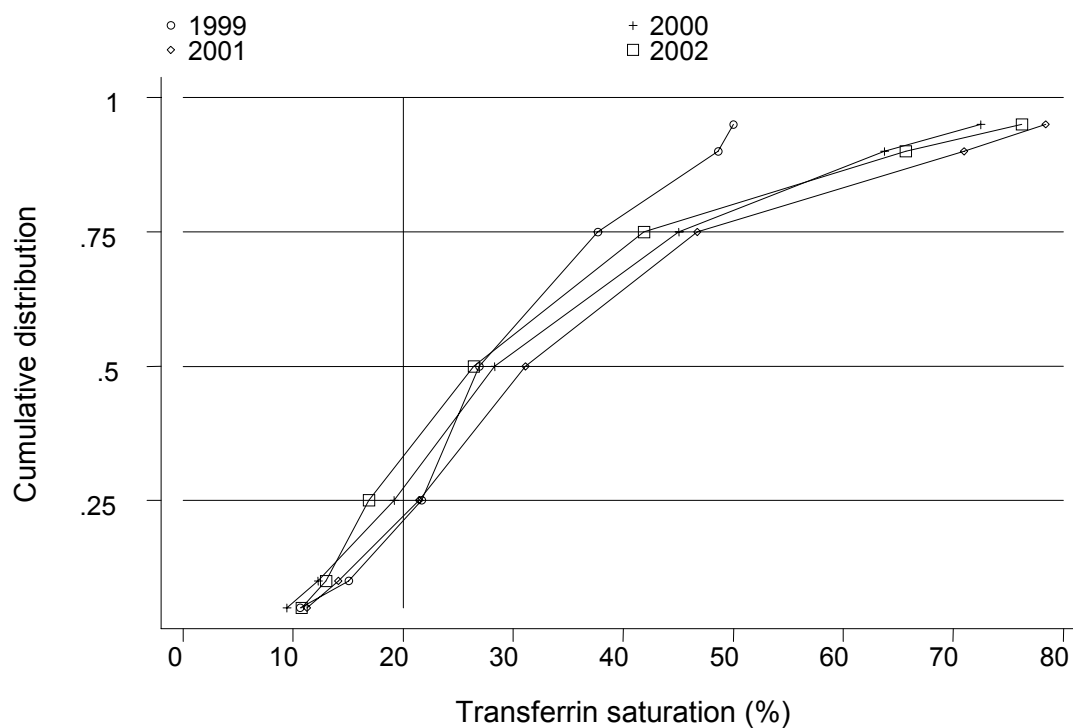
**Figure 3.2.40: Cumulative distribution of serum Iron on rHuEpo by year**



**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               |

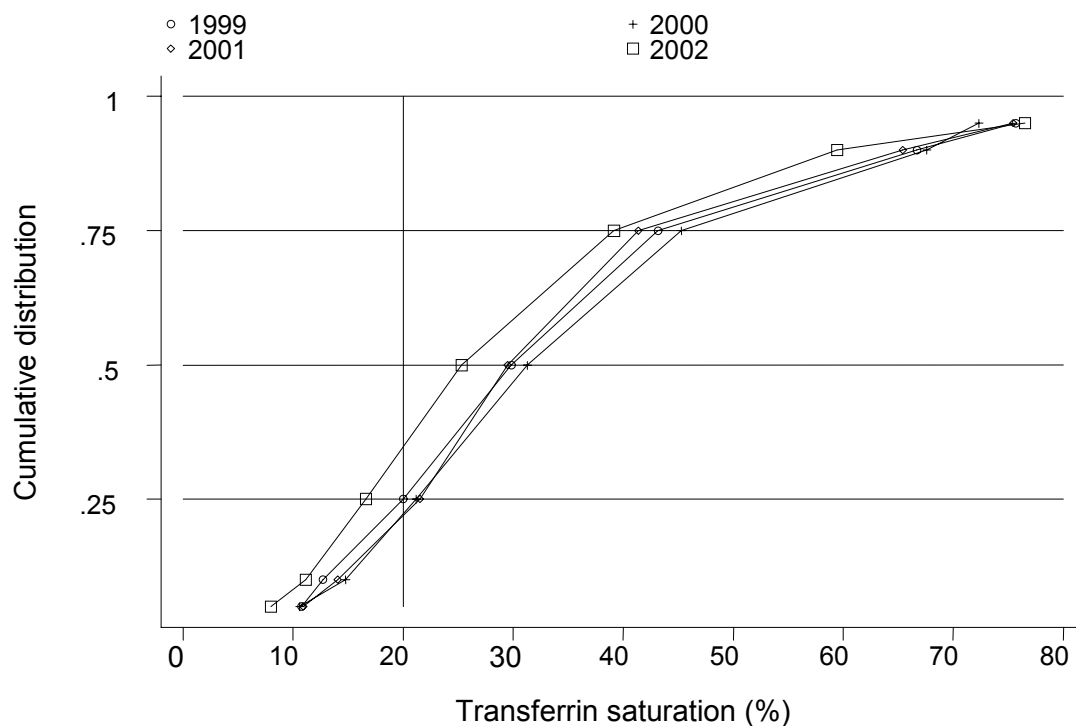
**Figure 3.2.41: Cumulative distribution of serum Transferrin Saturation without rHuEpo by year**



**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               |

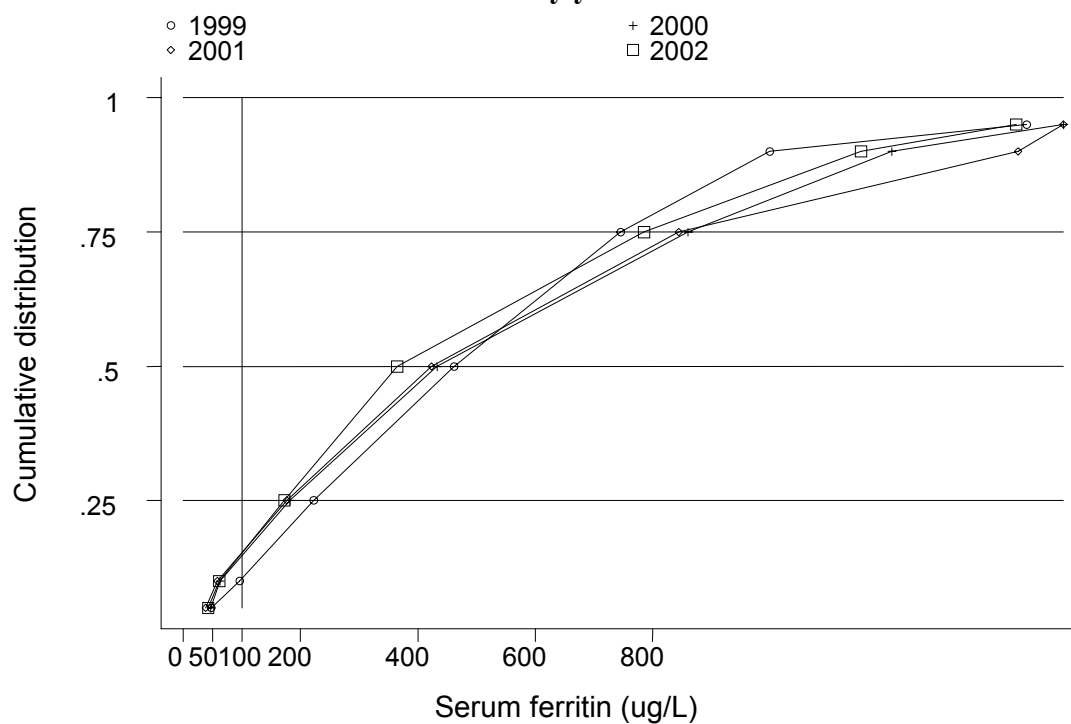
**Figure 3.2.42: Cumulative distribution of serum Transferrin Saturation on rHuEpo by year**



**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                    |

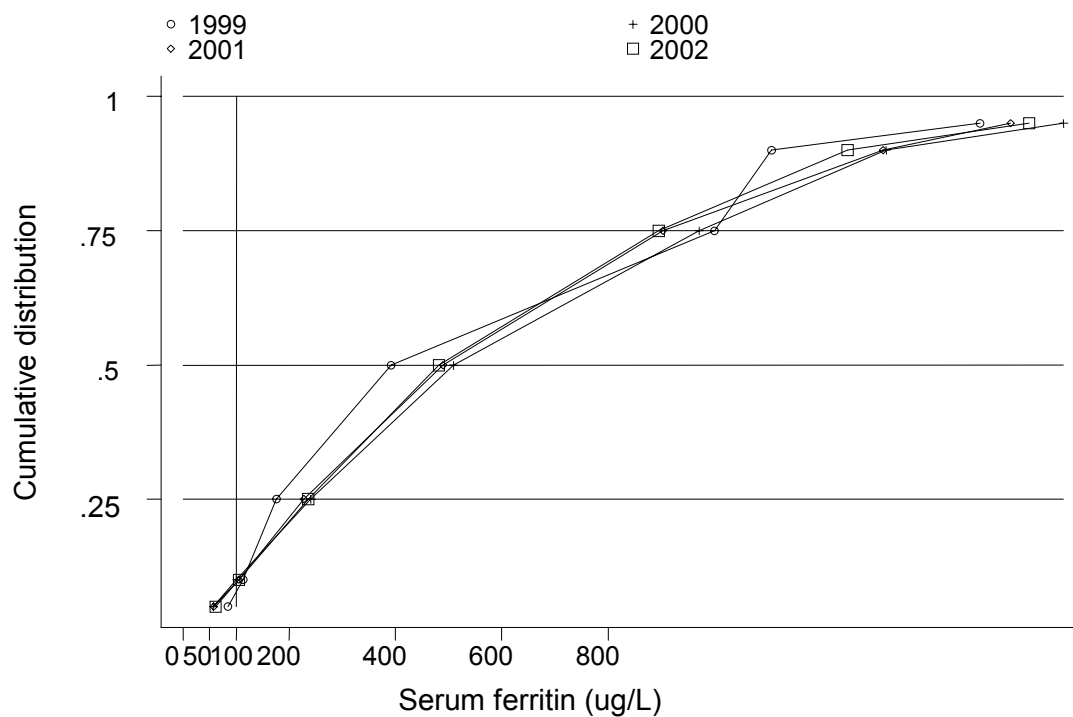
**Figure 3.2.43: Cumulative distribution of serum Ferritin without rHuEpo by year**



**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                    |

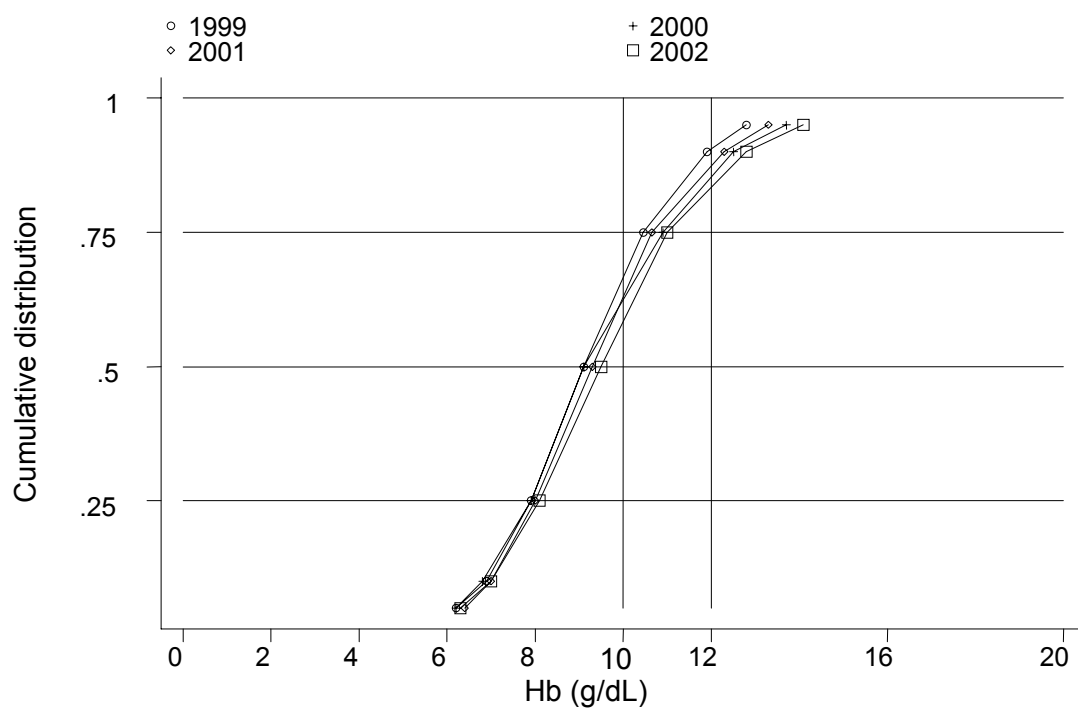
**Figure 3.2.44: Cumulative distribution of serum Ferritin on rHuEpo by year**



**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 $\geq 10$ & $\leq 12$ 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                  |

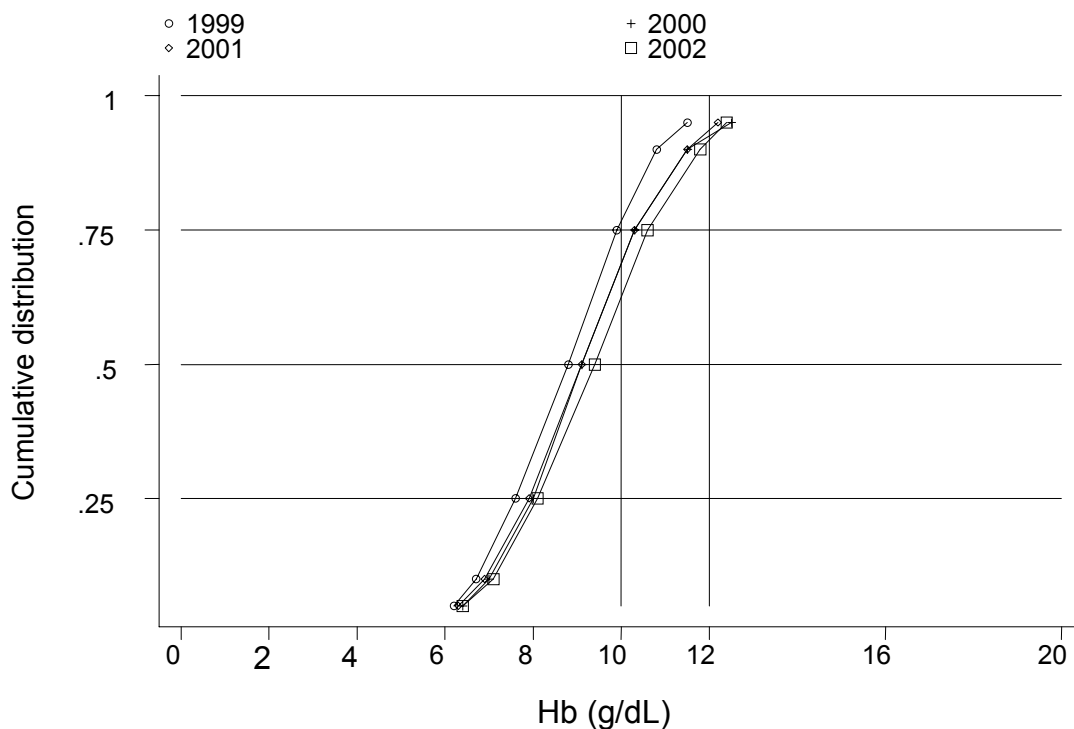
**Figure 3.2.45: Cumulative Distribution of Haemoglobin without rHuEpo by year**



**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 $\geq 10$ & $\leq 12$ 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**

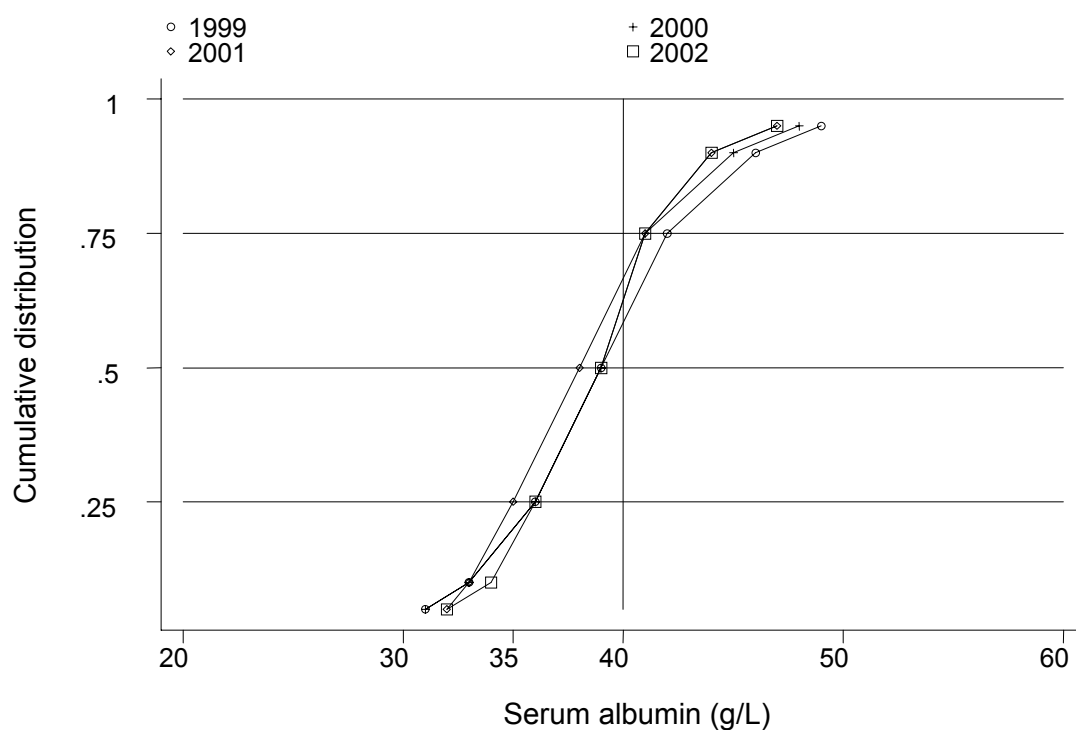


### 3.2.13 NUTRITIONAL STATUS OF HD PATIENTS, NGO CENTRES

**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                |

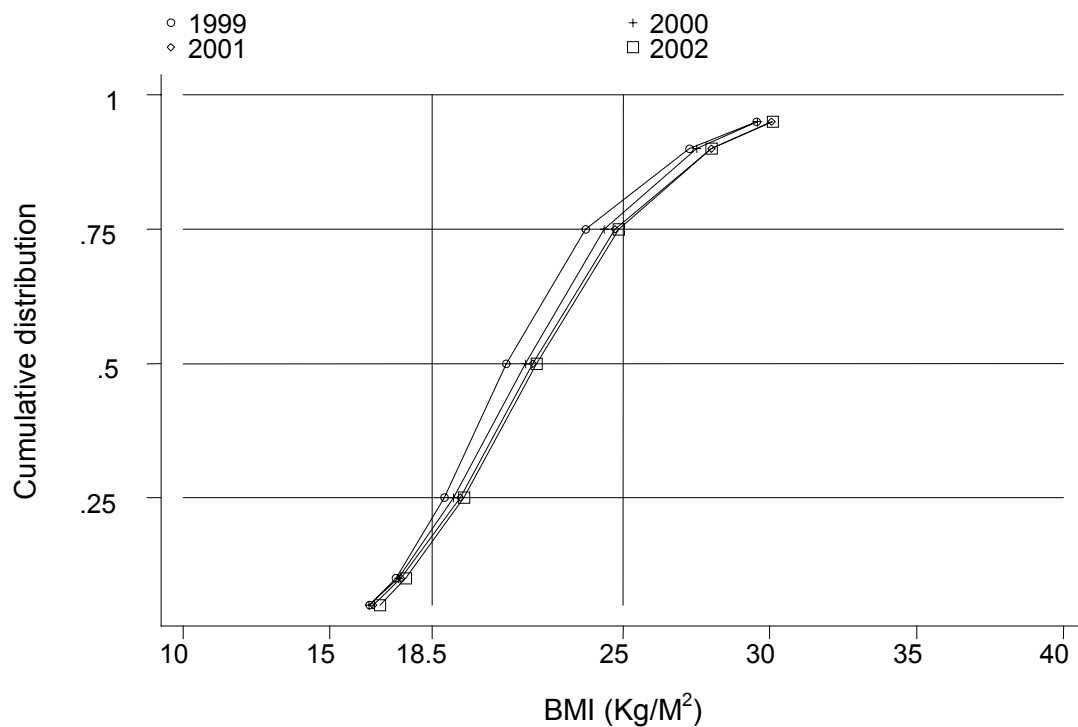
**Figure 3.2.47: Cumulative distribution of serum Albumin by year**



**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 $\geq 18.5$ & $\leq 25$ | % 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**

