

# **CHAPTER 1**

## **All Renal Replacement Therapy in Malaysia**

Lim Yam Ngo  
Lim Teck Onn  
Lee Day Guat

**SECTION 1.1: STOCK AND FLOW**

The intake of new dialysis patients continued to show a linear increase - from 1855 in 2000 to 4468 in 2008. The number of prevalent dialysis patients has similarly increased from 6689 in 2000 to at least 21 thousand in 2009. (Data for 2009 however are preliminary since at the time of writing this report there was still many new patients yet to be notified to registry.)

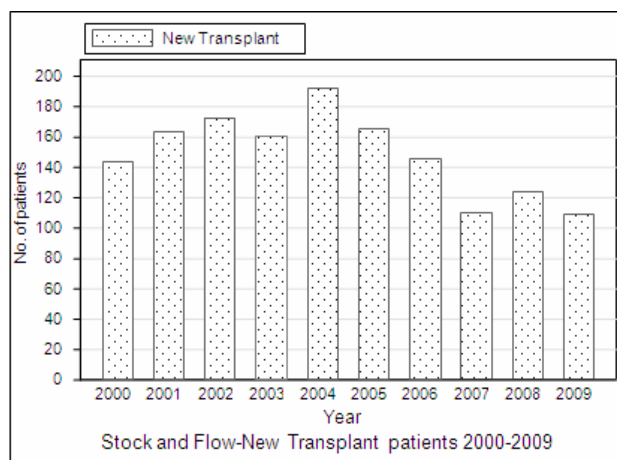
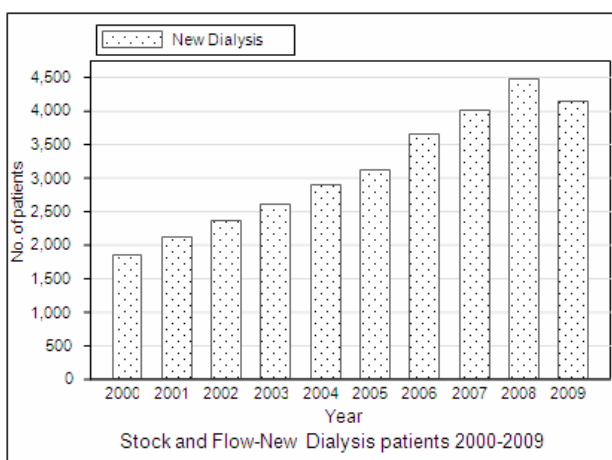
The number of new kidney transplant recipients seems to be showing a decreasing trend from 2005 due most probably to the increasing proscription against commercial transplantation. Patients with functioning renal transplants have also begun to plateau since 2006. (Table and Figure 1.01)

**Table 1.1:** Stock and Flow of RRT, Malaysia 2000-2009

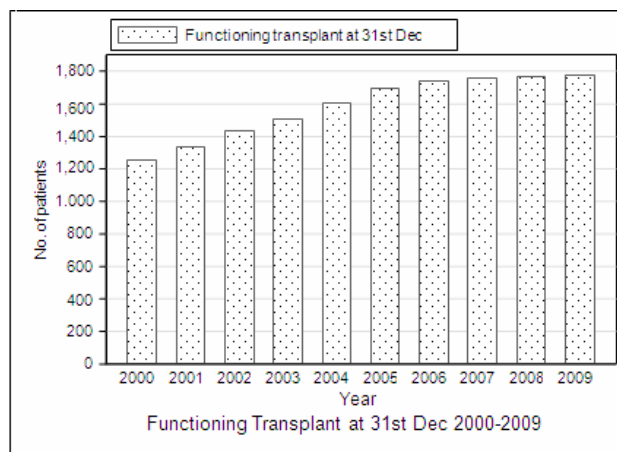
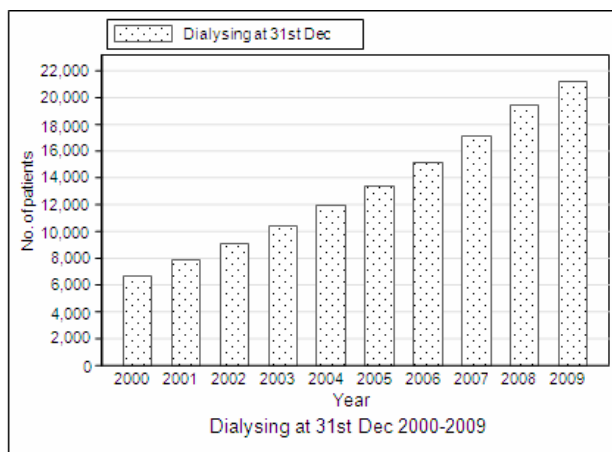
| Year  | 2000 | 2001 | 2002 | 2003  | 2004  | 2005  | 2006  | 2007  | 2008  | 2009  |
|---|------|------|------|-------|-------|-------|-------|-------|-------|-------|
| New Dialysis patients                               | 1855 | 2112 | 2362 | 2609  | 2892  | 3132  | 3656  | 4015  | 4468  | 4146  |
| New Transplants                                     | 143  | 163  | 172  | 160   | 192   | 165   | 145   | 110   | 124   | 109   |
| Dialysis deaths                                     | 602  | 821  | 933  | 1169  | 1287  | 1467  | 1752  | 1890  | 2054  | 2172  |
| Transplant deaths                                   | 30   | 37   | 35   | 39    | 42    | 44    | 55    | 41    | 52    | 39    |
| Dialyzing at 31 <sup>st</sup> December              | 6689 | 7837 | 9108 | 10423 | 11873 | 13393 | 15125 | 17133 | 19381 | 21159 |
| Functioning transplant at 31 <sup>st</sup> December | 1255 | 1339 | 1433 | 1507  | 1602  | 1692  | 1739  | 1753  | 1768  | 1779  |

**Figure 1.1:** Stock and Flow of RRT, Malaysia 2000-2009

(a) New Dialysis and Transplant patients



(b) Patients Dialyzing and with Functioning Transplant at 31<sup>st</sup> December 2000-2009



## SECTION 1.2: TREATMENT PROVISION RATE

Dialysis acceptance rates doubled over 10 years from 79 per million population in 2000 to 161 per million in 2008. We expect this figure to increase further in 2009 as at the time of writing this report there was still many new patients yet to be notified to registry. The incident kidney transplant rate of 4 per million populations was not enough to increase the transplant prevalence rates over the last few years. Dialysis prevalence rate more than doubled over the last 10 years, from 285 per million population in 1999 to more than 700 per million in 2009.

**Table 1. 2:** New Dialysis Acceptance rate and New Transplant Rate per million population 2000-2009

| Acceptance rate | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|-----------------|------|------|------|------|------|------|------|------|------|------|
| New Dialysis    | 79   | 88   | 96   | 104  | 113  | 120  | 137  | 148  | 161  | 146  |
| New Transplant  | 6    | 7    | 7    | 6    | 8    | 6    | 5    | 4    | 4    | 4    |

**Figure 1.2:** New Dialysis Acceptance and New Transplant Rate 2000-2009



**Table 1.3:** RRT Prevalence Rate per million population 2000-2009

| Prevalence rate | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|-----------------|------|------|------|------|------|------|------|------|------|------|
| Dialysis        | 285  | 326  | 371  | 416  | 464  | 513  | 568  | 631  | 699  | 747  |
| Transplant      | 53   | 56   | 58   | 60   | 63   | 65   | 65   | 65   | 64   | 63   |

**Figure 1.3:** Dialysis and Transplant Prevalence Rate per million population 2000-2009

