KIDNEY DIALYSIS FOUNDATION

ANNUAL REPORT
PERITONEAL DIALYSIS PROGRAMME
2011

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1. EXECUTIVE SUMMARY

The Peritoneal Dialysis Centre of the Kidney Dialysis Foundation is located at the Ghim Moh Centre and the programme started on 1 July 2003. The dialysis service was formerly contracted out to a dialysis provider but since 1 January 2010 the programme has been directly administered by KDF.

This report covers medical data collated at the end of 2011.

Demographics: There were 55 patients on the PD programme as of 31 Dec 2011. Only one patient from Alexandra Hospital joined the programme during the year.
The mean age of the prevalent 55 patients was 54 ± 10.7 years; 21 (38.2%) were male, 34 (61.8%) female; Chinese-41, Malay-13, Indian-1. Thirty-seven were on CAPD and 18 on APD. The major cause of end-stage renal failure was diabetic nephropathy making up 100.0% of the new patients and 30.9% of the existing patients. Chronic glomerulonephritis (no biopsy) also accounted for 34.5% of the cases. The age of entry into the programme was 65 years.

Deaths and Withdrawals: There were 9 deaths and 7 withdrawals. Of the 7 withdrawals, two received transplants, one transferred to hemodialysis because of technical problems and the other four because of peritonitis. The commonest cause of death was non-PD related infections (44.4%).
The death rate was 12.7% based on total number of patients in the year and the mean age at death was 58 ± 9 years.

Hospitalisations: 50.7% of the patients were admitted in the year. The admission rate was 1.25 episodes per patient year or 14.8 days per patient year. The diabetic patients were more likely to be admitted (61.3% vs 42.5% in non-diabetic patients). PD related admissions accounted for 14.7% of all admissions.

Dialysis Parameters
Dialysis Adequacy: The total KT/V was 2.29 ± 0.33 with 100% of the patients meeting the minimum target of 1.7.
Anaemia: The mean haemoglobin was 10.67 ± 1.91 g/dl with 92.7% on erythropoietin.
Serum Albumin: The patients had a low serum albumin level with a mean of 31.3 ± 3.84 g/L. The majority (96.3%) of the patients could not meet the lower limit of normal which is 37 g/L.
Mineral Metabolism: The mean corrected serum calcium was 2.5 ± 0.25 mmol/L, serum phosphate 1.58 ± 0.5 mmol/L and iPTH 65.5 ± 56.8 pmol/L. All the patients were on calcium-based phosphate binders and 6 were on Lanthanum carbonate.
Lipid profiles: The mean LDL cholesterol was 2.65 ± 1.03 mmol/L and triglyceride 2.02 ± 1.1 mmol/L. The mean HDL cholesterol level was 1.08 ± 0.28 mmol/L.

Transplant Waiting List: 21.8% of the patients were on the National Transplant waiting list while the majority (76.4%) was medically not eligible for transplantation.

PERITONEAL DIALYSIS PROGRAMME

1. STAFFING

Medical

The Medical Director (Peritoneal Dialysis) and volunteer doctor, Dr Tan Seng Hoe (on alternate months) continue to review patients monthly. Patients are reviewed once in 6 months following their routine blood investigations. The patients also go for follow-up with their primary physicians in restructured hospitals every 6 months or less. Urgent medical cover has been arranged with family physicians working in the vicinity using the same clinics as those arranged for the hemodialysis patients.

Nursing

The PD programme is managed by PD Clinical Nurse Fan Fung Yin, Florence with assistance from Patient Services Senior Nurse Clinician Ms Lay Kwee Chin and Clinical Coordinator Ms Theresa Soh. Baxter Healthcare provides service in doing home visits.

DIET COUNSELLING

The PD clinical nurse will counsel patients on their diet at the PD centre based on the blood test results when they come to the centre for doctor's review or procedures e.g. transfer set change.

PATIENT WELFARE

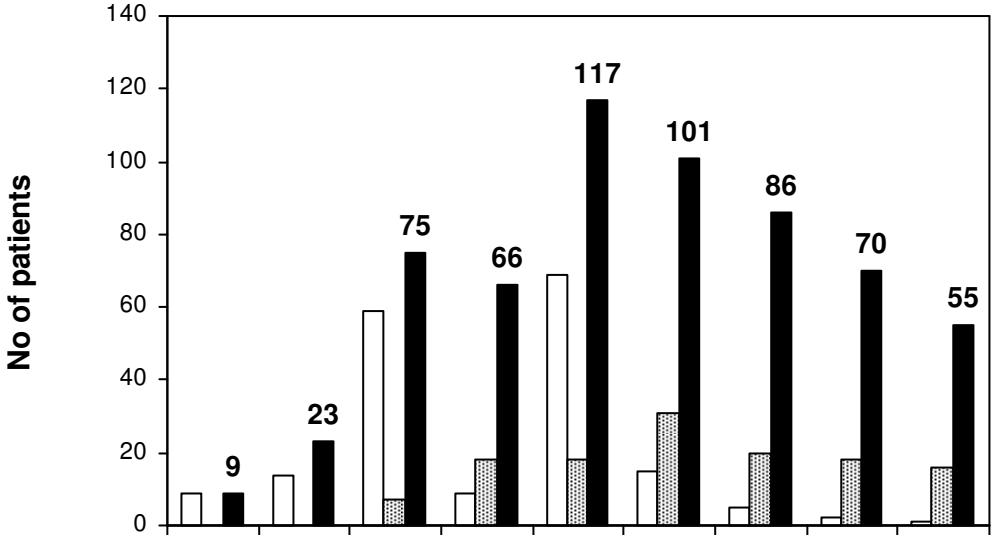
Patients continued to receive subsidies for their dialysis and erythropoietin on a case to case basis and were managed by Welfare Officer, Ms Sandy Lim.

2. PATIENT POPULATION

There were 55 patients on the PD programme as of 31 December 2011. Only one case from the Alexandra Hospital (AH) was accepted into the PD programme during the period of 1 Jan – 31 Dec 2011.

During the same period of 1 Jan – 31 Dec 2011, 16 patients exited the programme; there were 7 transfers to hemodialysis and 9 deaths.

Fig 1: Patient Stock and Flow



	2003	2004	2005	2006	2007	2008	2009	2010	2011
□ Entry	9	14	59	9	69	15	5	2	1
▨ Exit	0	0	7	18	18	31	20	18	16
■ Total	9	23	75	66	117	101	86	70	55

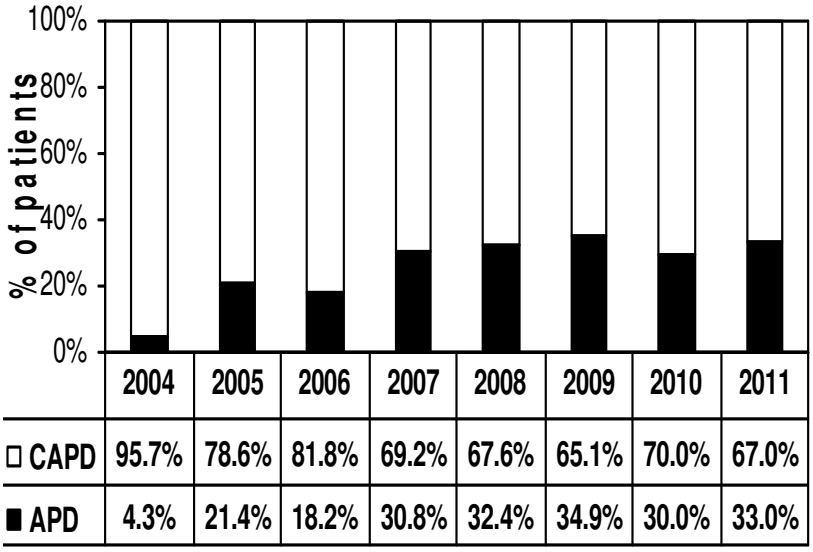
Table 1: Source of Referral

	2003	2004	2005	2006	2007	2008	2009	2010	2011
SGH	7	12	22	2	68	15	5	1	0
NUH	2	2	35	6	0	0	0	1	0
Private / TTSH	0	0	2	1	1	0	0	0	0
AH	-	-	-	-	-	-	-	-	1
Total Entries	9	14	59	9	69	15	5	2	1

Patient characteristics

The mean age of the existing 55 patients was 54 ± 10.7 years, with a preponderance of females [Male: 21 (38.2%), Female: 34 (61.8%)]. The ethnic distribution was similar to the general population. Thirty-seven patients were on CAPD and 18 on APD. The proportion of patients on APD remained the same as in previous years and stands at 33% of the PD population. The main cause of end-stage renal failure in the PD programme was chronic glomerulonephritis (34.5%) with diabetic nephropathy second, making up 30.9% of the existing patients.

Figure 2: Modality of PD



	2004	2005	2006	2007	2008	2009	2010	2011
CAPD	95.7%	78.6%	81.8%	69.2%	67.6%	65.1%	70.0%	67.0%
APD	4.3%	21.4%	18.2%	30.8%	32.4%	34.9%	30.0%	33.0%

Table 2: Gender of new patients

	2006		2007		2008		2009		2010		2011	
	n	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
Male	6	66.7	40	58.0	5	33.3	3	60.0	1	50.0	0	0
Female	3	33.3	29	42.0	10	66.7	2	40.0	1	50.0	1	100
Total	9	100.0	69	100.0	15	100.0	5	100.0	2	100.0	1	100

Table 3: Gender of prevalent patients

	2006		2007		2008		2009		2010		2011	
	n	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
Male	27	40.9	57	48.7	45	44.6	41	47.7	28	40.0	21	38.2
Female	39	59.1	60	51.3	56	55.4	45	52.3	42	60.0	35	61.8
Total	66	100.0	117	100.0	101	100.0	86	100.0	70	100.0	55	100

Table 4: Ethnic distribution of new patients

	2006		2007		2008		2009		2010		2011	
	n	**%**	**n**	**%**	**n**	**%**	**n**	%	**n**	**%**	**n**	**%**
Chinese	7	77.8	59	85.5	12	80.0	4	80.0	1	50	1	100
Malay	1	11.1	7	10.1	1	6.7	1	20.0	1	50	0	0
Indian	1	11.1	2	2.9	2	13.3	0	0	0	0	0	0
Others	0	0	1	1.4	0	0	0	0	0	0	0	0
Total	9	100.0	69	100.0	15	100.0	5	100.0	2	100	1	100

Table 5: Ethnic distribution of prevalent patients

	2006		2007		2008		2009		2010		2011	
	n	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
Chinese	44	66.7	90	76.9	76	75.2	64	74.4	52	74.3	41	74.5
Malay	18	27.2	22	18.8	18	17.8	16	18.6	15	21.4	13	23.6
Indian	4	6.1	4	3.4	7	6.9	6	7.0	3	4.3	1	1.8
Others	0	0	1	0.9	0	0	0	0	0	0	0	0
Total	66	100.0	117	100.0	101	100.0	86	100.0	70	100.0	55	100

Table 6: Mean age at entry into programme

Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
Mean age (years)	59	56	57	44	62.4	65
SD	13.9	11.6	11.7	11.9	8.1	-

Table 7: Mean age of existing patients

Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
Mean age (years)	54	55	54	54	56	54
SD	11.3	11	10.7	10	10.9	10.7

Table 8: Etiology of end-stage renal disease in new patients

	2006		2007		2008		2009		2010		2011	
Etiology	n	%	n	%	n	%	**n**	**%**	**n**	**%**	**n**	**%**
Chronic GN (no biopsy)	1	11.0	19	27.5	4	30.8	1	20.0	-	-	-	-
IgA nephropathy	-	-	4	5.8	-	-	-	-	-	-	-	-
SLE	-	-	2	2.9	-	-	-	-	-	-	-	-
Focal sclerosing GN	-	-	1	1.4	-	-	-	-	-	-	-	-
Drug induced GN	-	-	-	-	-	-	-	-	-	-	-	-
Membranous GN	-	-	-	-	-	-	-	-	-	-	-	-
Diabetic nephropathy	7	78.0	33	47.8	9	60.0	3	60.0	2	100.0	1	100.0
PCKD	-	-	3	4.3	-	-	-	-	-	-	-	-
Renal calculi	-	-	-	-	-	-	-	-	-	-	-	-
Renovascular disease	-	-	-	-	-	-	-	-	-	-	-	-
TB Kidney	-	-	-	-	-	-	-	-	-	-	-	-
Others			5	7.2	2	13.13	1	20.0	-	-	-	-
Unknown	1	11.0	2	2.9	-	-	-	-	-	-	-	-
Total	**9**	**100.0**	**69**	**100.0**	**15**	**100.0**	**5**	**100.0**	**2**	**100.0**	**1**	**100.0**

Table 9: Etiology of end-stage renal disease in existing patients

	2006		2007		2008		2009		2010		2011	
Etiology	n	%	n	%	n	%	**n**	**%**	**n**	**%**	**n**	**%**
Chronic GN (no biopsy)	14	21.2	30	25.6	30	29.7	28	32.6	24	34.3	19	34.5
IgA nephropathy	5	7.5	9	7.7	8	7.9	6	7	5	7.1	4	7.3
SLE	1	1.5	2	1.7	2	2.0	2	2.3	2	3.0	2	3.6
Focal sclerosing GN	-		2	1.7	2	2.0	2	2.3	1	1.4	1	1.8
Drug induced GN	1	1.5	1	0.9	1	1.0	1	1.2	-	-	-	-
Diabetic nephropathy	37	56.3	53	45.3	39	38.6	30	34.9	24	34.3	17	30.9
PCKD	3	4.5	5	4.3	4	3.9	4	4.7	4	5.7	4	7.3
Renal calculi	1	1.5	1	0.9	1	1.0	1	1.2	1	1.4	1	1.8
Renovascular disease	2	3.0	-	-	-	-	-	-	-	-	-	-
TB Kidney	1	1.5	-	-	-	-	-	-	-	-	-	-
Others			5	4.3	6	5.9	5	5.8	4	5.7	3	5.5
Unknown	1	1.5	9	7.7	8	7.9	7	8.1	5	7.1	4	7.3
Total	**66**	**100.0**	**117**	**100.0**	**101**	**100.0**	**86**	**100.0**	**70**	**100.0**	**55**	**100.0**

DEATHS / TRANSFERS AND SURVIVAL ANALYSIS

There were 9 deaths and 7 withdrawals in 2011. The causes of death are shown in Table 10 and the commonest cause of death was infection (acute cholecystitis, lung infection, septicemia and following a knee amputation).

The reasons for withdrawal from PD are shown in Table 11. Five patients were transferred to hemodialysis; four were due to peritonitis and the other one was due to a technical problem. Two patients received renal transplants.

The death rate was 12.7% based on total number of patients in the year. The mean age at death in 2011 was 58 ± 9 years.

Table 10: Cause of Death

	2006		**2007**		**2008**		**2009**		**2010**		**2011**	
Cause of Death	n	%	n	%	n	%	n	%	**n**	**%**	**n**	**%**
Acute Myocardial Infarction	1	8.3	1	7.6	10	41.7	1	7.2	1	9.1	1	11.1
Other Cardiac	-	-	-	-	2	8.3	5	35.7	2	18.2	-	-
Cerebrovascular Accident	2	16.8	-	-	-	-	-	-			-	-
Infections	5	41.7	4	30.7	5	20.8	3	21.4	3	27.2	4	44.4
Liver Failure	1	8.3	-	-	-	-	-	-	-	-	-	-
Malignancy	1	8.3	-	-	1	4.2	-	-	1	9.1	-	-
Accidental	1	8.3	-	-	-	-	-	-	-	-	-	-
Bleeding from Gastro-intestinal Tract	-	-	1	7.6	-	-	-	-	-	-	-	-
Died at Home	1	8.3	3	23.4	5	20.8	3	21.4	2	18.2	1	11.1
Others	-	-	4	30.7	1	4.2	2	14.3	2	18.2	3	33.4
Total	**12**	**100.0**	**13**	**100.0**	**24**	**100.0**	**14**	**100.0**	**11**	**100.0**	**9**	**100**
Death Rate	**14.3%**		**9.6%**		**17.4%**		**13.2%**		**12.5%**		**12.7%**	

Table 11: Reason of Withdrawal

	2006		**2007**		**2008**		**2009**		**2010**		**2011**	
Reason of Withdrawal	n	%	n	%	n	%	n	%	**n**	**%**	**n**	**%**
PD related Infection	1	16.6	5	100.0	5	71.4	3	50.0	5	71.4	4	57.1
Technical Reason	2	33.4	-		-	-	-	-	2	28.6	1	14.3
Elective transfer to HD	-	-	-	-	1	14.3	-	-	-	-	-	-
Transplant	2	33.4	-	-	1	14.3	3	50.0	-	-	2	28.6
Unknown	1	16.6	-	-	-	-	-	-	-	-	-	-
Total	**6**	**100.0**	**5**	**100.0**	**7**	**100.0**	**6**	**100.0**	**7**	**100.0**	**7**	**100.0**

HOSPITALISATIONS

There were 77 admissions in 36 patients and 50.7% of the patients in the PD programme were admitted in the year. Sixteen (44.4%) of the 36 patients admitted had at least two admissions with 3 patients (8.3%) having 5 or more admissions in the year and accounting for 133 admission days (14.7% of total admission days). The admission rate was 1.25 episodes per patient year or 14.8 days per patient year. The diabetic patients were more likely to be admitted (61.3% vs 42.5%) and had a higher rate of episodes per patient year (1.52 vs 1.08) and admission days per patient year (21.5 vs 10.5 in non-diabetic patients). PD-related infections accounted for 14.7% of the admissions, other infections accounted for 13.5% and other causes accounted for 67.1%.

When compared to the previous year (2010), the rates of hospitalization were slightly higher.

Table 12: Hospitalisations

HOSPITALISATION	**ALL**		**DM**		**NON-DM**	
	2010	**2011**	2010	**2011**	2010	**2011**
Number of patients ever in prog	88	**71**	41	**31**	47	**40**
Total patient years	78.4	**61.2**	34.4	**25.1**	44.0	**36.1**
Number of patients ever admitted	45	**36**	24	**19**	21	**17**
Admission episodes	90	**77**	47	**38**	43	**39**
Admission days	821	**903**	496	**539**	325	**380**
Days hospitalized						
PD related – technical	0	**42**	0	**0**	0	**42**
- infection	163	**133**	121	**49**	42	**84**
Other Infections	299	**122**	167	**106**	132	**16**
Others	359	**606**	208	**384**	151	**238**
% patients ever admitted	51.7	**50.7**	58.5	**61.3**	44.6	**42.5**
Episodes per patient year	1.15	**1.25**	1.36	**1.52**	0.98	**1.08**
Days per patient year	10.5	**14.8**	14.4	**21.5**	7.39	**10.5**
Days per patient year						
PD related – technical	0.0	**0.69**	0.0	**0.0**	0.0	**1.16**
- infection	2.08	**2.17**	3.52	**1.95**	0.95	**2.33**
Other Infections	3.81	**1.99**	4.85	**4.22**	3.00	**0.44**
Others	4.58	**9.90**	6.05	**15.29**	3.43	**6.59**

Table 12: Hospitalisations (Continued)

HOSPITALISATION	**ALL**		**DM**		**NON-DM**	
	2010	**2011**	2010	**2011**	2010	**2011**
% of admissions						
PD related - technical	0.0	**4.7**	0.0	**0.0**	0.0	**5.2**
- infections	20.0	**14.7**	27.1	**10.5**	11.6	**12.8**
Other Infections	20.0	**13.5**	20.8	**18.4**	18.6	**2.5**
Others	60.0	**67.1**	52.1	**71.1**	69.8	**79.5**

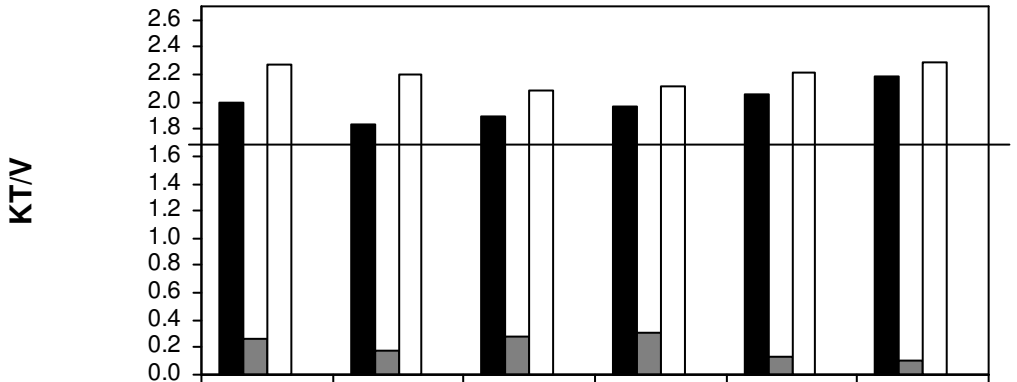
Hospitalisations during the period Jan-Dec 2011 were analysed and expressed as days hospitalized per patient year of dialysis programme.

DIALYSIS PARAMETERS

Dialysis Adequacy

Dialysis adequacy is assessed using the total KT/V and is measured 6 monthly. The minimum target total KT/V is 1.7. The total KT/V (which is the sum of the dialysate and residual KT/V) of the cohort was 2.29 ± 0.33. It is encouraging to note that the dialysate KT/V (2.18 ± 0.37) is also above the minimum target and this implies that no change in the dialysis prescription would be required when the patient loses residual renal function. Another observation is that 100% of the patients were above the minimum target of 1.7.

Fig 3: KT/V



	2006	2007	2008	2009	2010	2011
■ Dialysate	2.00	1.84	1.89	1.97	2.06	2.18
SD	0.4	0.34	0.39	0.5	0.35	0.37
▒ Residual	0.26	0.17	0.28	0.31	0.13	0.11
SD	0.3	0.25	0.32	0.43	0.34	0.25
□ Total KT/V	2.27	2.2	2.09	2.12	2.21	2.29
SD	0.5	0.43	0.41	0.49	0.44	0.33
% achieving KT/V 1.7	90.0%	82.5%	74.6%	81.90%	92.20%	100.00%

Table 13: KT/V

	2006	2007	2008	2009	2010	2011
N	60 (6 not done)	40 (11 not done)	71 (30 not done)	83 (3 not done)	64 (6 not done)	50 (5 not done)
Total KT/V	2.27 ± 0.5	2.20 ± 0.43	2.09 ± 0.41	2.12 ± 0.49	2.21 ± 0.44	2.29 ± 0.33
Dialysate KT/V	2.00 ± 0.4	1.84 ± 0.34	1.89 ± 0.39	1.97 ± 0.5	2.06 ± 0.35	2.18 ± 0.37
Residual KT/V	0.26 ± 0.3	0.17 ± 0.25	0.28 ± 0.32	0.31 ± 0.43	0.13 ± 0.34	0.11 ± 0.25
% patients with KT/V ≥ 1.7	90.0 (6/60 <1.7)	82.5 (7/40 <1.7)	74.6 (18/71 <1.7)	81.9 (15/83 <1.7)	92.2 (5/64 <1.7)	100.0

Peritonitis

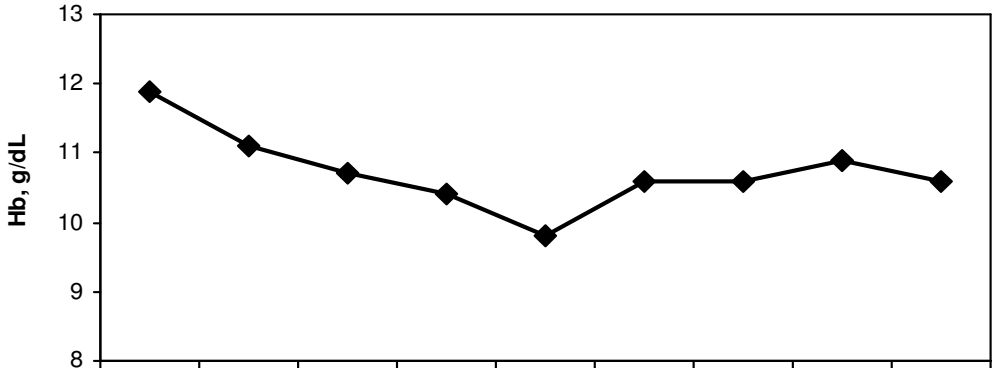
Patients who develop peritonitis are treated at their primary hospitals. As such, the KDF PD programme only captures data of hospitalisations for peritonitis.

Nine patients (6 CAPD, 3 APD) were admitted for peritonitis during the period of 1 Jan 2011 to 31 Dec 2011. Five resolved and 4 were transferred to hemodialysis.

Anaemia

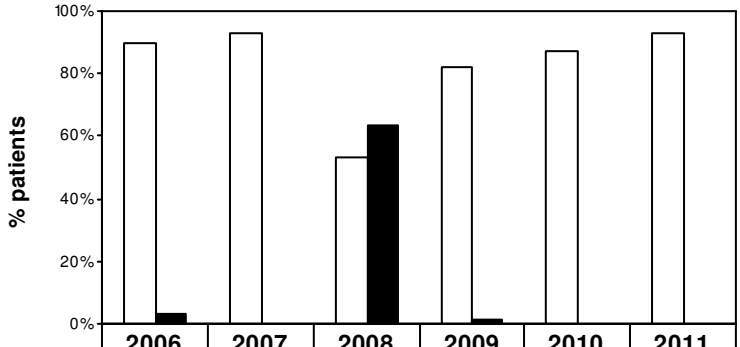
The mean haemoglobin was 10.67 ± 1.91 g/dl with 92.7% (51/55) of the patients receiving erythropoietin (EPO). The mean dose of EPO was 6192 ± 3157 U/week (range 1000 – 12000 U/week). The mean haemoglobin has remained stable over the last four years. All patients with a haemoglobin less than 10 g/dl were on EPO. A combination of factors prevent adequate dosing of erythropoietin in PD patients and these include non compliance (as the injections are self-administered), uncontrolled hypertension leading to omission of the erythropoietin and financial constraints.

Fig 4: Mean Haemoglobin Level



	2003	2004	2005	2006	2007	2008	2009	2010	2011
	11.9	11.1	10.7	10.4	9.8	10.6	10.6	10.9	10.6
SD	2.6	1.8	1.8	1.6	2.0	1.9	1.9	1.8	1.9

Fig 5: Percentage of patients on EPO



	2006	2007	2008	2009	2010	2011
□ Total % on EPO	90.0%	93.0%	53.0%	82.0%	87.1%	92.7%
■ < 10, not on EPO	3.3%	0.0%	63.6%	1.0%	0.0%	0.0%

Table 14: Haemoglobin and Use of EPO

Hb (g/dl)	2006		2007		2008		2009		2010		2011	
N	66		43		83*		86		68		54	
Mean ± SD	10.4± 1.6		9.8 ± 2.0		10.6 ± 1.9		10.6 ± 1.9		10.9 ± 1.8		10.6 ± 1.9	
< 10 not on EPO	1	1.5%	0	0	14	16.9%	1	1.0%	0	0%	0	0%
< 10 on EPO	29	43.9%	22	51%	18	21.7%	32	37.0%	20	29.4%	20	37.0%
> 10 not on EPO	5	7.6%	3	7%	25	30.1%	14	16.0%	6	8.8%	4	7.4%
> 10 on EPO	31	47.0%	18	42%	26	31.3%	39	45.0%	42	61.8%	30	55.6%

* 18 patients with no data (2008)

Serum Albumin

The patients continue to have a low serum albumin level with a mean of 31.3 ± 3.84g/L. The majority of patients (96.3%) did not achieve a normal albumin level of 37 g/L and 29.6% were below 30 g/L. This occurs as a result of protein loss in the dialysate in patients on peritoneal dialysis. This is a perennial problem in patients on PD and is best addressed through nutritional supplementation.

A protein supplement (Beneprotein) subsidy program was started in the hemodialysis programme in September 2011 and was subsequently extended to PD patients. It is hoped the protein supplementation will bring about improvement in the albumin levels of the patients.

Table 15: Serum albumin

Albumin (g/L)	2006	2007	2008	2009	2010	2011
N	66	46	82	84*	70*	54
Mean ± SD	31.0 ± 5.2	30.3 ± 3.9	30.9 ± 4.3	30.4 ± 4.4	30.9 ± 4.2	31.3 ± 3.8
% < 37 g/L	45.5	58.7	52.4	93.0	88.6	96.3
% < 30 g/L	40.9	39.1	40.2	43.0	42.9	29.6

* No results in 2 patients

Mineral Metabolism

The mean corrected serum calcium was 2.5 ± 0.25 mmol/L and the mean serum phosphate was 1.58 ± 0.5 mmol/L (50.9% of patients had a serum phosphate > 1.78 mmol/L). All the patients were on calcium supplements (calcium acetate 65.5%, calcium carbonate 32.7%) and 6 patients (10.9%) were also on Lanthanum carbonate (non-calcium phosphate binder). As Lanthanum is costly, the patients received a subsidy for the medication.

The mean iPTH level was 65.5 ± 56.8 pmol/L with only 25.0% of the patients falling within the limits of 16.5-33 pmol/L. The 2003 KDOQI guidelines recommend that the iPTH in dialysis patients (CKD Stage 5) should be maintained within the range of 16.5 – 33 pmol/L. Hyperphosphatemia is a major factor and more attention to reducing the phosphate levels to within normal limits will definitely contribute to reducing the problem and the eventual need for surgical parathyroidectomy. The subsidies for Lanthanum carbonate are timely.

Table 16: Percentage of patients according to iPTH levels

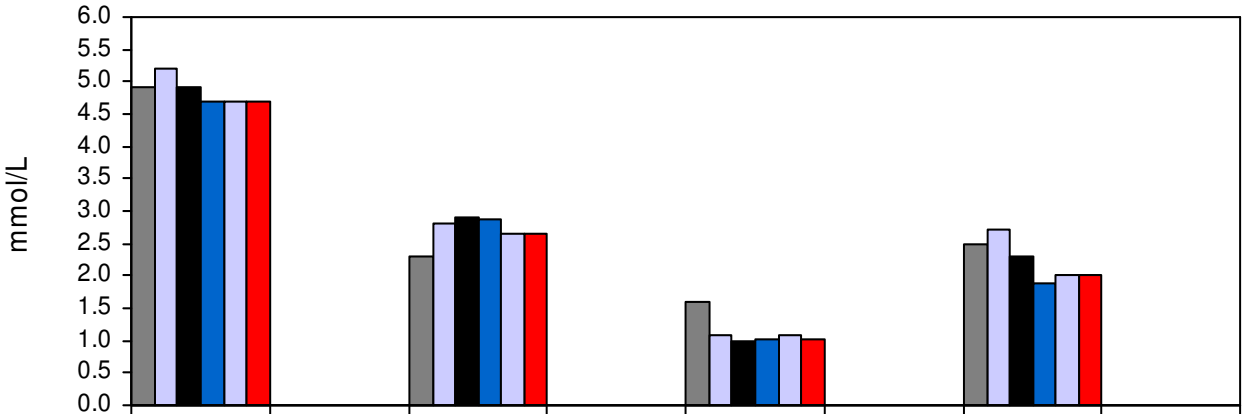
	2010		**2011**	
	N	%	N	%
<16.5	10	15.9	12	23.1
16.5-33.0	16	25.4	13	25.0
>33.0	37	58.7	27	51.9
Total	63*	100.0	52	100.0

*Date not available for 7 patients (2010)

Hyperlipidaemia

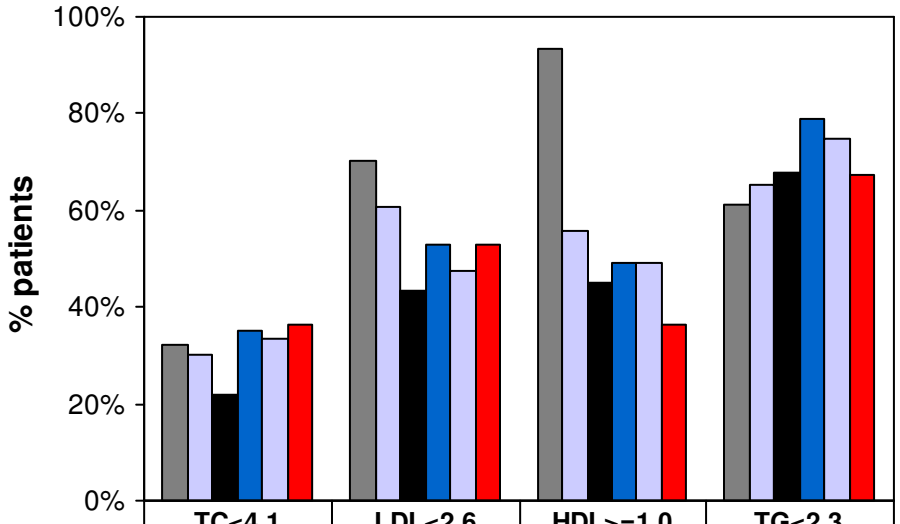
The lipid profile of the patients remained largely unchanged when compared to the previous years. The mean LDL cholesterol level was 2.65 $\pm$ 1.03 mmol/L with 52.7% of the patients achieving the recommended MOH guidelines for LDL cholesterol of < 2.6 mmol/L. The mean HDL cholesterol level was 1.08 ± 0.28 mmol/L and the mean triglyceride level was 2.02 ± 1.1 mmol/L. It is encouraging to note that a large proportion of patients (67.3%) achieve the recommended MOH guideline for triglyceride levels.

Fig 6: Lipid profile



	Total Chol	SD	LDL	SD	HDL	SD	TG	SD
2006	4.9	1.4	2.3	1.1	1.6	0.7	2.5	2.2
2007	5.2	1.8	2.8	0.9	1.1	0.4	2.7	2.3
2008	4.9	1.1	2.9	0.8	1.0	0.4	2.3	2.0
2009	4.69	1.2	2.87	1.26	1.03	0.34	1.88	1.25
2010	4.7	1.2	2.64	1.06	1.08	0.34	2.02	1.44
2011	4.7	1.1	2.64	1.03	1.03	0.28	2.024	1.1

Fig 7: Lipid profile – Percentage achieving MOH target levels



	TC<4.1	LDL<2.6	HDL>=1.0	TG<2.3
2006	32.3%	70.3%	93.5%	61.3%
2007	30.0%	60.9%	55.8%	65.1%
2008	21.8%	43.2%	44.9%	67.9%
2009	35.0%	53.0%	49.0%	79.0%
2010	33.3%	47.6%	49.2%	74.6%
2011	36.3%	52.7%	36.3%	67.3%

TRANSPLANT WAITING LIST

Twelve (21.8%) patients were registered on the transplant register. Forty-two patients (76.4%) were not eligible for transplant for reasons including exceeding the age limit of 60 years* (18/42 patients, 42.9%), ischemic heart disease (3 patients) and seropositivity for Hepatitis B or C (2 patients). It is encouraging to note that all patients have undergone assessment and none are pending evaluation.

*The age limit of 60 years was recently lifted and the patients now have to be reassessed for fitness for transplant.

Table 17: Transplant status

	2006		**2007**		**2008**		**2009**		**2010**		**2011**	
N	66		117		101		86		70		55	
Registered	13	19.7%	28	23.9%	19	18.8%	17	19.8%	17	24.3%	12	21.8%
Not eligible	21	31.8%	52	44.4%	63	62.4%	48	55.8%	35	50%	42	76.4%
Opted out	11	16.7%	2	1.7%	2	2%	2	2.3%	2	2.9%	1	1.8%
Pending	21	31.8%	35	29.9%	17	16.8%	19	22.1%	16	22.9%	0	0

INTERIM HEMODIALYSIS

Five patients required interim hemodialysis (four due to peritonitis, one membrane failure) and all were subsequently converted to permanent hemodialysis. Two of the patients were accepted into the KDF HD Programme and three went to private dialysis centres.

3. ACTIVITIES OF THE PD CENTRE

Patient Activities

The PD patients participated in the following activities:

1. a Patient Education Seminar on "Stretch it out, sweat it out" cum social outing to Marina Bay Sands SkyPark on 8 May 2011, and a
2. Patients' Party with the theme "Celebrations" on 18 December 2011.

Patient Review

The Medical Director reviews about 10 patients monthly at the PD centre. The PD nurse schedules all patients' 6 monthly review in KDF accordingly.

4. CONCLUSION

The KDF PD programme provides an affordable home-based dialysis to patients who often require high dependency care. Meeting dialysis targets remains a challenge in this group as compliance is often difficult to track. However, dedicated personal care from the PD dialysis nurses has certainly added quality to the dialysis programme.

We would like to thank all who have contributed to the smooth running of the programme.

Dr Grace Lee Siew Luan
Medical Director (Peritoneal Dialysis)