

Appendix II

Key Parameters & Performance Measures to Monitored Annually In the National Kidney Registry in Lebanon - Hemodialysis

A key premise of the NKR is to impact a process of continuous quality improvement in clinical practices, services and outcomes in HD patients in Lebanon. Annual monitoring of key performance measures provides the information to accurately highlight areas of strengths and weaknesses. This knowledge can gauge progress in addressing gaps and shortfalls in services and improvement in practices through education, training, prevention planning and issuance of guidelines and recommendations.

The operational, epidemiological, clinical, laboratory and outcomes data listed below are proposed to be measured again for the next reporting period and published in next year's issue of this report with discussion of the differences and what they mean.

I. Key operational and epidemiological parameters

On November 30, 2012

- Number of HD Units: 66
- Number of active Patients on HD: 3191
- Number of patients in registry: 3155 (includes mortality)
- Prevalence of ESRD in Lebanon: 855 patients per million people
- Incidence: Cannot report yet. Incident patient definition in this report (Recent Starters): Started HD on November 1, 2010 until cutoff date

Data analyzed

Data recorded June 1, 2011 through June 2, 2012.

Dialysis initiation data: On date of first HD session

- Number of patients analyzed: 1938
 - o Incident (recent starters): 539
 - o Prevalent (earlier starters): 1399
- Number of patients reported dead: 149
- First Year Mortality: 27.1%
- Total patient-months: 16979
- Average monthly updates per patient: 8.7 patient-months

II. Key parameters from fixed patient data modules

Chapter	Parameter	Mean	SD	Median	Categories	Frequency	
4 Demographics	Age at start of HD	55	17.7	57			
	Incident	60.9	15.7	63			
	Prevalent	52.6	17.9	54			
	Age on cutoff date	59.4	16.2	N/A			
	Age at mortality	66.7	13.8	N/A			
	Survival (months)	56.5	58.5	37			
	Gender (% of pats)				Female	43.2	
Incident					46.4		
Prevalent					42.2		
5 Dialysis Initiation	Coverage (% of pats)				MOPH	55.9	
					NSSF	24.9	
					Army	8.6	
	ESRD primary cause (% of pats)				Diabetes (All)	28.5	
					Incident	32	
					Hyperten.. (All)	19.6	
					Incident	25.6	
				Kidney Dis. (All)	33.4		
				Incident	24.4		
	Body Mass Index (Kg/m ²)		25	4.9	24.4	(% of pats) >28	24.6
						<21	21.1
	Comorbidity at onset of HD (% of pats)					Cardiac	35.8
						Hypertension	57.8
						Diabetes	29.2
Hemoglobin (g/dL)	9.7	1.7	9.8	<10 (% of pats)	51.9		
<u>Incident Patients:</u>							
Ferritin	422	503	262	<100 (% of pats)	20.2		
TSAT	27.2	20	14.6	<20 (% of pats)	43.3		
S-Creatinine	8.5	2.7	8.4				
eGFR (MDRD)	7.1	3.3	6.3				
iPTH	418	400	304	>300 (% of pats)	48.3		
S. Albumin	3.5	0.6	3.6	<3.6 (% of pats)	43.8		
S. Calcium	8.3	1.3	8.4	<8 (% of pats)	29.5		
S. Phosph	5.1	1.5	5	>6 (% of pats)	28.6		
Fistula (% of pats)					Inserted	52.5	
					Used 1 st Session	30.2	

III. Key parameters from monthly update data modules

Chapter	Parameter	Mean	SD	Median	Categories	Frequency
6 Dialysis Param. / Vasc. Access	Dial session (mins)	230	25.3	240		
	Dial hours/Wk	10.6	2	11		
	How long on Dial (mons)	58.6	61.3	38	< 12 (% of pats) > 60 (% of pats)	31.3 30.3
	Dial with AVF				(% of Pat-mons)	78.6
	VA Complication (% of Pat-mons)				Thrombosis Stenosis Infection Cannulation	36.4 24.6 13.8 11.6
	Type of Repair (% of Pat-mons)				Surgery Replacement	33.1 20.6
	Back to Original VA				(% of Pat-mons)	33.8
	URR	66.9	9.8	67.7	< 65 (% of Pats)	38.7
	Kt/V	1.3	0.2	1.3	< 1.2 (% of Pats)	29
	IDWG (Kg)	2.6	1.3	2.4	> 4 (% of Pats)	9.3
7 Anemia	Hb (g/dL)	10.5	1.6	10.5	<10 (% Pat-mons) >12 (% Pat-mons)	34.8 16.8
	S-Iron (mg/dL)	49	25.2	46		
	TIBC (mg/dL)	212	59	215		
	Ferritin (µg/dL)	1288	1134	922		
	TSAT (%)	24.7	16.4	20.7		
8 Mineral & Molecular Balance	S-Calcium (mg/dL)	8.7	1.2	8.8	<8 (% Pat-mons)	19.1
	S-Phosph (mg/dL)	3.1	1.7	2.4	<3 (% Pat-mons)	64.3
	S-Potassium (mg/dL)	5.4	0.9	5.4	>6.5 (% Pat-mons)	10
	Albumin (g/dL)	3.8	0.5	3.9	<3.6 (% Pat-mons)	27.5
	iPTH (pg/dL)	375.9	417	235	>300 (% Pat-mons)	41.8
	Alk Phos (mg/dL)	114.7	74.9	93		
9 Vital Signs & Anthro- pometrics	Pre-Dial BP (mmHg)					
	Systolic	134.8	21	130	>150 (% Pat-mons)	26%
	Diastolic	74.6	11.9	70	<60 (% Pat-mons)	24.2%
	Post-Dial Diastolic	65.8	11.2	62	<60 (% Pat-mons)	25.4%
	BMI (kg/m2)	25.3	9.5	24.4	>28 Female (% Pat-mons) Male	25.9% 22.2%
	Waist Circumf. (cm)	99.5	15.1	99	>110 (% Pats)	25
10 Medi- cations	Oral P-binder (%Pat)				Yes	88.1%
	Vit-D 1-alpha Calcitriol				Yes	67.3%
					Yes	None
	Anti-Hypertensive				Yes	71.6%
	%Diab. Using Insulin				Yes	56.5%
11 Outcomes & Compli- cations	% of Pats Hospitalzd				Yes	29.4%
	Length of Hosp Stay	2.98	5.05	2	>7 days (% of events)	13.7%
	ER Adm (% Pats)				Yes	7.3%
	CV event (% Pats)				Yes	7.0%
	Depression (% pats)				Yes	15.9%