

Chapter 3 Dialysis Centers and Patients / Prevalence of ESRD in Lebanon

Prevalence

During the time span between 2007 and 2012, the hemodialysis scene in Lebanon witnessed a noticeable spurt in the number of new dialysis units from 51 to 64, and patients from 2400 to about 3200. That constitutes a 33% increment compared to an increase of about 5% in the population of Lebanon during the same period. The prevalence of HD grew from 570 to over 700 patients per million people. After adding kidney transplants, the corresponding prevalence of End Stage Renal Disease (ESRD) in Lebanon increased from 735 to 855 patients per million people. Reported prevalence worldwide ranged from 200 to 2200 patients per million people (**Figure 3.1**). All countries in the world experience similar or even faster spurts mainly due to improved diagnosis and providing renal replacement therapy to older patients.

Figure 3.1 Changes in Prevalence of ESRD in Lebanon & International

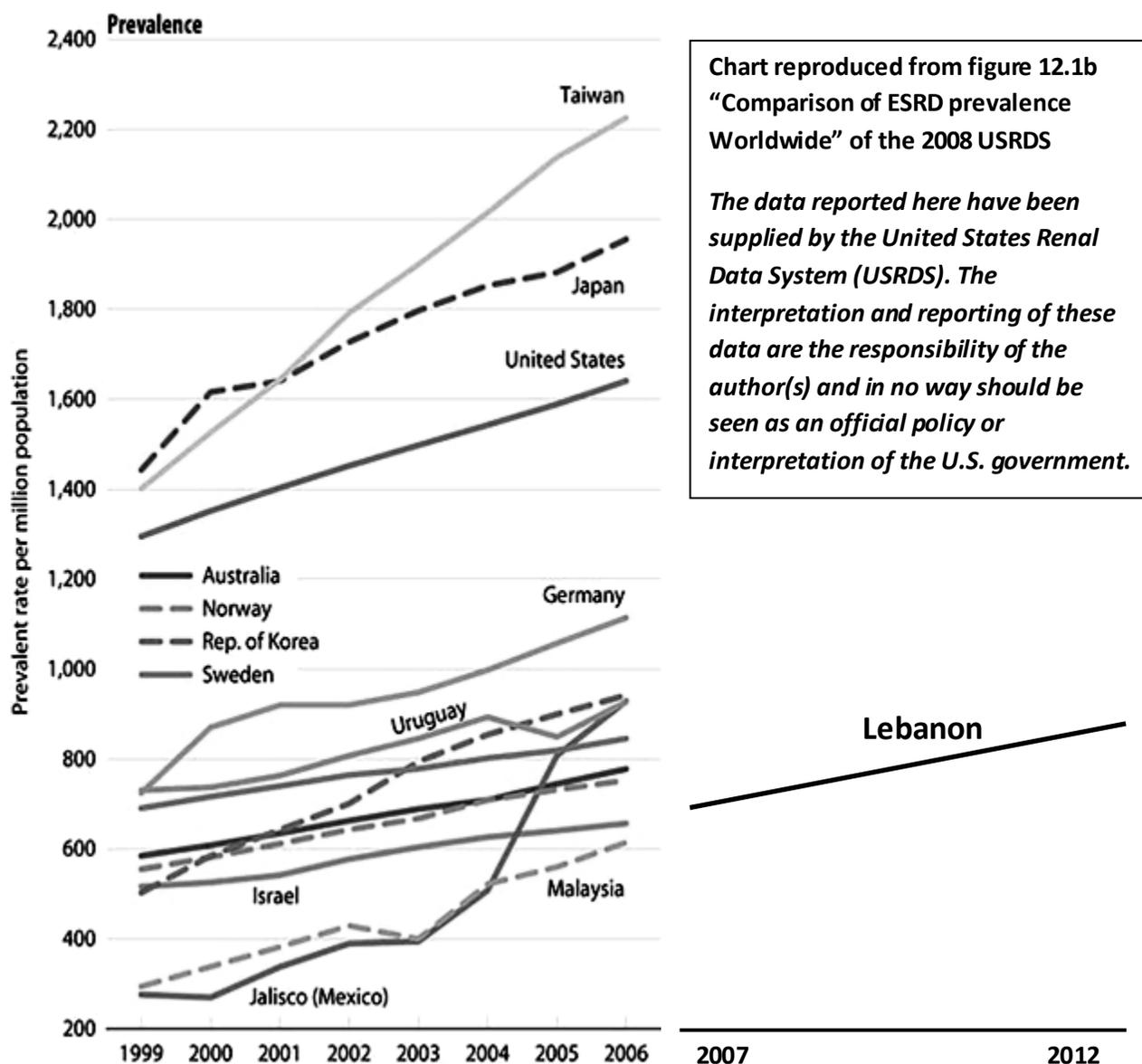


Chart reproduced from figure 12.1b
 "Comparison of ESRD prevalence
 Worldwide" of the 2008 USRDS

*The data reported here have been
 supplied by the United States Renal
 Data System (USRDS). The
 interpretation and reporting of these
 data are the responsibility of the
 author(s) and in no way should be
 seen as an official policy or
 interpretation of the U.S. government.*

The prevalence of stages 3 (moderate) and 4 (severe) CKD is estimated as a multiple of the prevalence of ESRD by a range of 10 to 20 depending on age, gender, race, diabetic status, cardiac disease and other comorbidity. With year 2012 prevalence of 4100 ESRD patients in Lebanon (HD + kidney transplant), the number of CKD patients range between 41,000 and 82,000 (corresponding to 0.9 -1.7 % of the population of Lebanon) of whom the majority are unaware of it.

Incidence

In this inaugural report, there was a priority to assess and compare the demographic and clinical profile of patients initiating HD recently and historically. This comparison would potentially anchor CKD studies, and screening, prevention and awareness programs. A cutoff date of November 1, 2010 (six months prior to launch of registry) was designated to separate a “New” patient from an “Old” patient. The scientific team decided not to compute an incidence rate in this report since not all centers reported complete data. An incidence rate may be computed more accurately starting the 2013 annual report.

Hemodialysis Centers

The NKR approached all 66 hospitals servicing HD patients in Lebanon (Figure 3.4) most between March and July 2011. The distribution of HD units by Mohafaza is shown in Figure 3.2. The MOPH played an important regulatory role to first encourage and subsequently require participation of dialysis units in the registry, through two official letters distributed in April and November 2011 respectively. The actual participation was variable with 35 dialysis units dialyzing over 2000 patients (about 65%) having >80% compliance (Ref. Table 3.1). The experience of the remaining 31 dialysis units is detailed below:

- Nine units started operation in 2012: Seer Governmental, Tannourine, Haroun, Siblin governmental, Saida Governmental, Bekaa, Tel Chiha, Shahar Elgharbi and BentJbeil Governmental. Many of the patients at these units transferred from other hospitals and their registry records were transferred to the new hospital.
- Seventeen units participated but made partial entries (20–50% compliance), mostly demographics and dialysis initiation. Patients of these units were not included in the analytic files.
- Three units agreed to participate and their staff was trained, yet made no entries.
- Two units declined to participate in the registry.

Figure 3.2 Distribution of HD Units

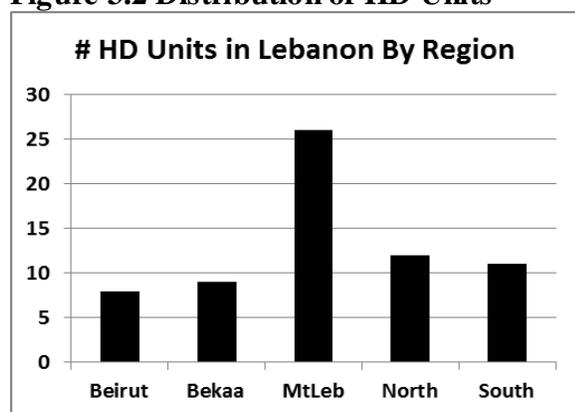
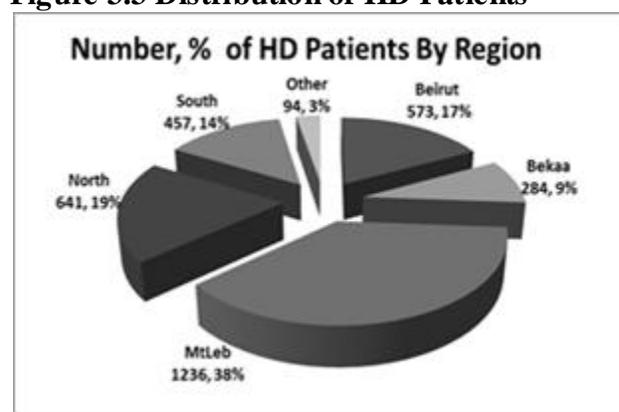


Figure 3.3 Distribution of HD Patients

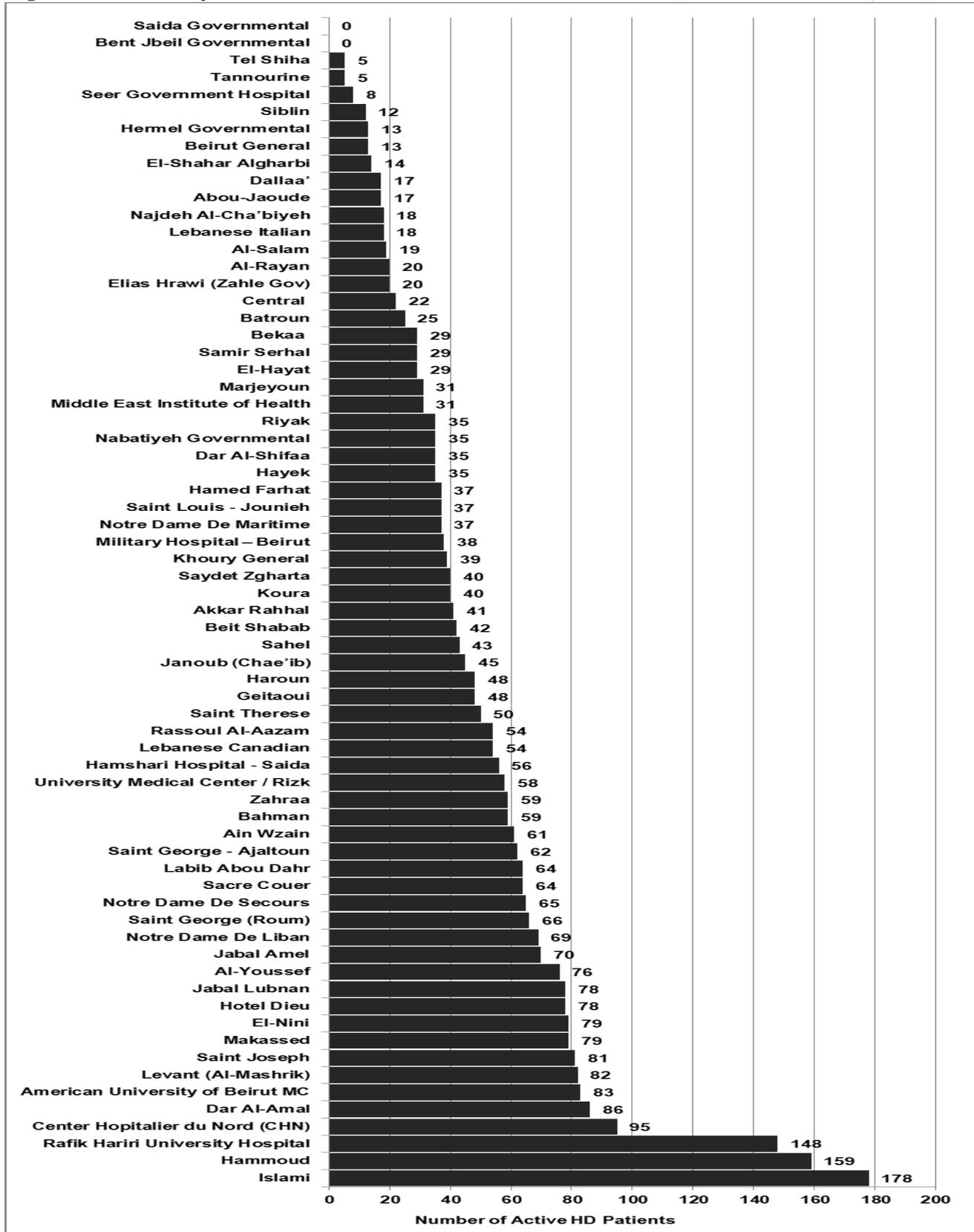


There are two additional dialysis units operational in Lebanon:

1. The military hospital in Beirut – operated by the Lebanese Army health services unit and is restricted to army personnel and their families.
2. Hamshari hospital in Saida – South Lebanon operated by the Palestinian Red Crescent and its services are restricted to Palestinians residing in Lebanon.

Contacts are underway with both hospitals to be included in the NKR.

Figure 3.4 Hemodialysis Units in Lebanon and Their Patient Count (As of November 30, 2012)



Hemodialysis Patients

There were 3191 active HD patients in Lebanon on November 30, 2012 distributed by Mohafaza as shown in Figure 3.3. In the registry, there were records for 3155 HD patients on that date. Excluding mortalities, over 2800 patients were alive as of that date with active registry records (> 88% of patients in Lebanon). For the purpose of inclusion in the analytics of this report, patients who had a registry record between a start date of June 1, 2011 and a cutoff date of June 2nd, 2012 were eligible, provided they have at least two monthly updates. As a result of these criteria, there were 1938 patients included in the analytics of this report (Table 3.2). Each patient may have up to 12 months of data updates (patient-months).

Mortality

Data on patient mortality was reliably documented in over half of the dialysis units, but was not available or was partial in the remaining units. It was not possible to compute an accurate mortality rate for this population, crude or adjusted. Mortality patterns are discussed in chapters 4 & 11.

Table 3.2 Number of Dialysis Units, Patients, Mortalities and Patient-Months in this Report by Patient Status and Region, as of November 15, 2012

Category	Overall	Patient Category		Region of Lebanon					
		Incident	Prevalent	Beirut	Bekaa	MtLeb	North	South	Other
# Dialysis Units	66	-	-	8	9	26	12	11	2
# Patients Active on Dialysis in Lebanon	3191	-	-	573	284	1236	641	457	94
# Patients in Registry	3128	829	2299	515	315	954	744	600	NA
# Reported Mortality	267	84	183	19	24	68	72	84	NA
# Patients Analyzed	1938	539	1399	143	228	568	576	423	NA
# Mortality among Patients Analyzed	149	35	114	10	12	35	40	52	NA
# Patient-Months Analyzed	16797	3764	13033	1130	1497	4610	5376	4184	NA
Average Patient-Months Analyzed	8.7	7.0	9.3	7.9	6.6	8.1	9.3	9.9	NA

If a patient dies, enter their mortality date in the monthly update, and
KEEP THEIR ENTIRE RECORD

DO NOT DELETE RECCORDS OF DEAD PATIENTS