

Lifetime Medical Cost of ESRD Dialysis Patients.

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The economic burden of ESRD patients on Medicare has increased significantly over the past decade. The Medicare expenditure of the ESRD program was \$5.8 billion in 1991, whereas it has reached \$14.1 billion in 2001. Some annual cost analyses have been done for ESRD patients, but the ESRD patient lifetime medical cost (LMC) has not been addressed. We analyze the LMC of dialysis patients using the 1991-1992 incident cohort.

The 1991-1992 incident ESRD dialysis patients who survived at least 90 days after initiation of ESRD and had Medicare as the primary payer at day 91 were included. The patients were followed from day 91 to the end point death or censoring point transplant, lost to follow-up, or December 31, 2001, whichever came first. Since the censoring is informative to LMC, we excluded the patients younger than 40, who usually have higher censoring rate due to higher transplantation rate and longer survival. The censoring rate is 6.7%. For this low censoring rate the informative censoring would not affect the results. The 52,877 patients were included in the final analysis.

The expected LMC is 253 K dollars for a ESRD dialysis patient. The median, 25th, and 75th percentiles are 171, 72, and 349 K dollars, respectively. The table displays the mean cumulative cost with 25th and 75th percentiles at some time points and the effects of some selected factors on LMC and survival from Cox models. The age was used as a continuous variable in the model. All effects are significant.

The LMC of ESRD patients is considerable. All the risk factors have the same direction on affecting LMC and survival time: longer survival with more cost. Patient demographics (age, race, and sex) have a larger effect on LMC than on survival, whereas the ESRD primary cause (DM and Non-DM) and comorbidities (CVA/TIA, CHF, and Cancer) have larger effect on survival than on LMC.

Year	1	3	5	7	9	11	
25th Pctile (\$k)	46	166	297	433	570	678	
Mean (\$k)	65	212	366	520	675	798	
75th Pctile (\$k)	81	247	423	596	768	903	
	Age	Non-White	Male	DM	CVATIA	CHF	Cancer
LMC	0.020	-0.432	0.116	-0.138	0.137	0.217	0.027
Survival	0.017	-0.372	0.073	-0.226	0.186	0.275	0.089