

Cost Effectiveness of PD vs. HD Therapy

Objective: To estimate Medicare expenditures in incident hemodialysis (HD) and peritoneal dialysis (PD) patients.

Patients and Methods: We selected 1999 incident dialysis patients who were ≥ 20 years old and survived for 90 days after initiation on ESRD. Patients were followed from day 91 until one year after day 91 and censored at death, transplant, or loss-to-follow-up in an intent-to-treat model. Medicare allowable per member per month (PMPM) cost was calculated for each patient. Multiple linear regressions were used for analyzing costs with the dependent variable of logged PMPM and explanatory variables of age, gender, race, primary cause of diabetes, serum albumin, body mass index (BMI), GFR, hemoglobin, and modality.

Results: All explanatory variables are significantly associated with Medicare allowable PMPM. Young white male patients without diabetes and with BMI ≥ 20 , lower estimated GFR, higher values of hemoglobin and serum albumin, and PD are associated with low Medicare costs. After adjusted for above variables, PD patients are about 15% (95% confidence interval: 12.5-17.7%) less costly compared to HD patients in the first year follow-up period. The following table shows the predicted PMPM in 1999 by age and modality for white male patients with diabetes, BMI 20- <25 , albumin 2.7- <3.2 , GFR 6.1-8.1, and hemoglobin ≥ 12 .

Age	20-44	45-64	65-74	75 +
PMPM (\$): HD	4,376	4,728	5,197	5,560
PMPM (\$): PD	3,713	4,012	4,410	4,718

Conclusion: In the 1999 incident Medicare dialysis population, PD patients were significantly less costly compared to HD patients in the 1st year. These data suggest PD in the 1st year is a cost effect dialysis treatment for ESRD.

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