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A Comparison of Time to Dialysis Among Individuals With and Without Access to a Nurse-Facilitated Disease Management Program

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This study measures the relationship between access to a nurse-based disease management (DM) program and time to initiation of chronic dialysis among individuals with Stage 4 or 5 Chronic Kidney Disease (CKD). The DM program studied employs telephonic and hard copy communications to patients and providers to help patients understand CKD and how they can maximize their health.

This study examined commercially insured adults with Stage 4 or 5 CKD. Medical claims up to 36 months after the initial Stage 4 or 5 CKD identification date were reviewed for transition to End Stage Renal Disease (ESRD). We compared two populations: a group who had the DM program available to them and a group that did not. The availability of the program to the patient was dictated by the patient's employer purchasing the program.

Kaplan-Meier curves were used to estimate the probability of transitioning to dialysis up to 36 months after identification of Stage 4 or 5 CKD, and curves were compared between groups using the log rank test. We used a Cox-Proportional Hazards model to measure the risk relationship between DM program availability and time to chronic dialysis initiation, while controlling for age, gender, comorbidities, and method of identification.

The Kaplan-Meier probability estimates were lower for individuals with access to the DM program compared to individuals who did not have access to the program (p < 0.10), indicating slower time to chronic dialysis in the DM group. The Cox-Proportional hazard model indicated a decreased risk of initiating chronic dialysis among individuals who had access to the DM program compared to individuals who did not (hazard ratio = 0.91, p < 0.05).

These findings suggest that access to a nurse-facilitated DM program may be associated with delayed progression to chronic dialysis initiation among individuals with Stage 4 or 5 CKD.

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