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Lower Risk of Home Hemodialysis Attrition in Female Patients Using a Telehealth Platform

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Female patients are underrepresented in the home hemodialysis (HHD) population. This pattern may be due to inadequate care partner support. Tools that improve communication between patient and provider may serve as a care partner surrogate and reduce risk of HHD attrition. Nx2me Connected Health is a telehealth platform that collects NxStage System One cyclor data and patient vitals, transmits data to providers after each dialysis session, and enables providers to review data in the Nx2me Clinician Portal. We aimed to assess whether use of Nx2me was associated with reduced risk of HHD attrition in female patients on the System One cyclor.

We collected data from female HHD patients who initiated use of Nx2me by August 31, 2016, and within 3 months after HHD training initiation. For each Nx2me user, we identified 3 female matched controls who were on HHD, but did not use Nx2me. Matching factors comprised time on HHD at Nx2me initiation, care setting (in training or at home) at Nx2me initiation, and prescribed number of sessions per week. We followed patients until HHD attrition and classified the cause of attrition as either dialysis cessation (death or kidney transplant) or technique failure (conversion to another dialytic modality, due to health issues, treatment burden, or other issues). We used Fine-Gray regression to model risks of HHD attrition, dialysis cessation, and technique failure, with adjustment for age, race, and vascular access modality.

We identified 97 Nx2me users and 291 matched controls. Crude HHD attrition rates in Nx2me users and matched controls were 45.6 and 64.2 events per 100 patient-years, respectively. For Nx2me users versus matched controls, the adjusted hazard ratios of HHD attrition, dialysis cessation, and technique failure were 0.74 (probability of lower hazard in Nx2me users, 88%), 0.92 (56%), and 0.71 (88%), respectively.

Use of Nx2me Connected Health in female patients reduced risk of HHD attrition due to technique failure. The application of telehealth technology may increase the number of female dialysis patients who undergo HHD.

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