

**Title:** Characteristics and Effectiveness of Dedicated Care Programs for Patients Starting Dialysis: A Systematic Review

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**Background and Objectives:** Dedicated care programs, which provide increased support to patients starting dialysis, are increasingly being used to reduce the risk of complications. The objectives of this systematic review were to determine the characteristics of existing programs and their effect on patient-relevant outcomes.

**Design, Setting, Participants, and Measurements:** We searched Embase, MEDLINE, Web of Science, Cochrane CENTRAL, and CINAHL from database inception to November 20, 2019, for English-language studies that evaluated dedicated care programs for adult incident patients with end-stage kidney disease. Any study design was eligible, but we required the presence of a control group and patient-relevant outcomes (e.g., vascular access, mortality, quality of life). We extracted data describing the nature of the interventions, their components, and the reported benefits.

**Results:** The literature search yielded 12,681 studies. We evaluated 63 full texts and included 10 studies (n=6627 intervention patients). Seven of the studies evaluated programs for patients on hemodialysis and 3 for patients on peritoneal dialysis. All studies were observational, and there were no randomized controlled trials. The most common interventions included patient education (n=10) and case management (n=5), with nurses involved in 8 of 10 programs. The most common outcomes included mortality (n=8) and vascular access (n=4), with only 2 studies reporting on home dialysis uptake and 1 on transplantation. Four high quality studies evaluated programs that combined patient education and case management. In these programs, the relative

reduction in 90-day mortality ranged from 22% to 49% and the likelihood of achieving arteriovenous access ranged from no difference to a 2-fold increase. Pooled analysis was not possible due to study heterogeneity.

**Conclusions:** Few high quality studies have evaluated dedicated care programs for patients starting dialysis, and most only report on mortality and vascular access. More data is needed on other patient-relevant outcomes such as home dialysis, transplantation, and quality of life before widespread implementation of these resource-intensive care models.