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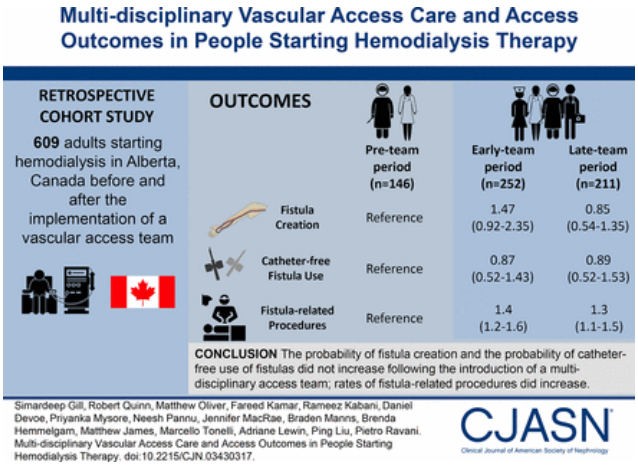
# Multi-Disciplinary Vascular Access Care and Access Outcomes in People Starting Hemodialysis Therapy

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## Visual Overview




## Abstract

**Background and objectives** Fistulas, the preferred form of hemodialysis access, are difficult to establish and maintain. We examined the effect of a multidisciplinary vascular access team, including nurses, surgeons, and radiologists, on the probability of using a fistula catheter-free, and rates of access-related procedures in incident patients receiving hemodialysis.

**Design, setting, participants, & measurements** We examined vascular access outcomes in the first year of hemodialysis treatment before (2004-2005, preteam period) and after the implementation of an access team (2006-2008, early-team period; 2009-2011, late-team period) in the Calgary Health Region, Canada. We used logistic regression to study the probability of fistula creation and the probability of catheter-free fistula use, and negative binomial regression to study access-related procedure rates.

**Results** We included 609 adults (mean age, 65 [±15] years; 61% men; 54% with diabetes). By the end of the first year of hemodialysis, 102 participants received a fistula in the preteam period (70%), 196 (78%) in the early-team period (odds ratios versus preteam, 1.47; 95% confidence interval, 0.92 to 2.35), and 139 (66%) in the late-team period (0.85; 0.54 to 1.35). Access team implementation did not affect the probability of catheter-free use of the fistula (odds ratio, 0.87; 95% confidence interval, 0.52 to 1.43, for the early; and 0.89; 0.52 to 1.53, for the late team versus preteam period). Participants underwent an average of 4-5 total

« Previous | Next Article »
Table of Contents

This Article

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CJASN December 07, 2017 vol. 12 no. 12 1991-1999

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access-related procedures during the first year of hemodialysis, with higher rates in women and in people with comorbidities. Catheter-related procedure rates were similar before and after team implementation; relative to the preteam period, fistula-related procedure rates were 40% (20%–60%) and 30% (10%–50%) higher in the early-team and late-team periods, respectively.

**Conclusion** Introduction of a multidisciplinary access team did not increase the probability of catheter-free fistula use, but resulted in higher rates of fistula-related procedures.

arteriovenous fistula | vascular access | Central Venous Catheters | hemodialysis | Aged | Odds Ratio | Logistic Models | Confidence Intervals | Comorbidity | renal dialysis | Probability | Surgeons | diabetes mellitus | Radiologists | Fistula | Canada

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