
**Abstract**

Background and Purpose: Placement of an arteriovenous fistula (AVF) prior to initiating hemodialysis can affect clinical outcomes for patients who subsequently initiate chronic hemodialysis treatments. Age-related variation in receipt of a functioning AVF prior to initiating hemodialysis is not well known. The purpose of this study was to examine age-related rates in use of AVF at the first outpatient hemodialysis treatment among U.S. incident patients on hemodialysis.

Findings: Among 526,145 patients identified, the use of AVF outpatient hemodialysis treatment was lower in the youngest (younger than 55 years) and oldest (80 years and older) vs. both 55 to 66-year and 67 to 79-year age groups. These findings persisted after adjusting for demographics, lifestyle behavior, employment and insurance status, physical/functional conditions, and co-morbid conditions.

Conclusions: The presence of a functioning AVF at initial hemodialysis treatment varies by age. Modifying healthcare policy and/or expanding the role of nephrology nurses should be considered to address this issue.