

# Dialysis Availability in Rural America



At the Heart of Health Policy

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Authors:

Amy Martin, DrPH  
Kevin J. Bennett, PhD  
Nathan Hale, PhD  
Janice C. Probst, PhD

South Carolina Rural Health Research Center  
January 2013



**Rural Health Research  
& Policy Centers**

Funded by the Federal Office of Rural Health Policy

[www.ruralhealthresearch.org](http://www.ruralhealthresearch.org)

Funding Acknowledgment:

This report was prepared under Grant Award U1CRH03711  
With the Federal Office of Rural Health Policy, Health Resources and Services Administration

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## Executive Summary

End stage renal disease (ESRD), a potential consequence of diabetes, hypertension and other chronic conditions, leaves the individual in need of a kidney transplant or kidney dialysis to survive. Depending on their clinical condition and service availability, patients may receive hemodialysis, generally performed in a clinic, or peritoneal dialysis, which can be performed at home. We used the Medicare Dialysis Compare files, which contain information about dialysis facilities in 2008, and the Standard Analysis File of the US Renal Data System, which contains information about ESRD patients in 2008, to explore the availability of services in rural America. Our research questions were:

- What is the current distribution of dialysis facilities, by characteristics and capacity, across levels of rurality?
- How does the distribution of facilities compare to estimated need, defined as patients with ESRD?
- How do dialysis facility performance measures compare across levels of rurality?

### Key Findings:

*The prevalence of dialysis use did not differ across urban versus rural counties.*

- We found the prevalence of dialysis use to be similar across rural and urban counties, with an overall median of 3.9 persons per 1,000 residents in 2008. The top three disorders leading to ESRD were also similar across geography (diabetes, hypertension, and glomerulonephritis).

*Rural residents travel further for dialysis services*

- While most residents of urban and micropolitan rural counties were likely to have a facility within their county, more than half of residents in small adjacent or remote rural counties must travel out-of-county for care. While only 23.5% of urban and 20.6% of micropolitan residents lacked an in-county facility, 63.9% of residents of small adjacent rural counties and 77.3% of those in remote rural counties must travel to an out-of-county facility.
- Rural ESRD patients were estimated to travel farther for care than urban residents, measuring from the ZIP Code of residence to the ZIP Code of the nearest facility. Rural residents lived a median of 33.3 driving miles from the closest facility, versus 13.7 miles for urban patients. Distances were longest for remote rural residents, who traveled an estimated 39.8 road miles to care.
- Travel burden was greatest among rural patients of “other” race, who traveled an estimated 46.0 road miles to the nearest facility. In small adjacent rural counties, dialysis patients of “other” race traveled an estimated 56.5 road miles for care.

*Fewer expanded services were offered in rural areas*

- The proportion of facilities offering peritoneal dialysis, home hemodialysis training, and after-hours (evening) services was lower in rural than in urban communities, affecting both choice of dialysis modality and the ability of rural ESRD patients and their families

to maintain normal employment schedules:

- Peritoneal dialysis: Available in 48.1% of urban counties, but only 36.3% of rural counties
- Home hemodialysis training: Available in 24.0% of urban counties, but only 16.7% of rural counties
- After-hours services: Available in 21.4% of urban, but only 8.5% of facilities in rural counties

*The characteristics of rural and urban dialysis facilities differed*

- The relative penetration of for-profit facilities was lower in rural counties. For-profit institutions accounted for 84.5% of all urban facilities, versus 75.9% of rural dialysis facilities.
- Chain membership was lower in rural counties. Among urban facilities, 82.0% were part of a chain, versus 77.5% among rural facilities.
- Rural dialysis facilities were smaller than facilities in urban counties and reported fewer patients per station. Urban facilities have a median of 18 stations each serving 12.6 patients, while rural facilities have a median of 13 stations each serving 9.7 patients.

*Dialysis quality outcomes were similar across rural and urban ESRD facilities*

- Despite differences between rural and urban facilities, quality differences as measured by hemoglobin, blood urea, and survival were small and did not show a clear advantage for facilities in either area.

Policy Implications

In 2011, the Centers for Medicare and Medicaid Services (CMS) switched to a per-treatment, prospective payment system for funding dialysis services, adjusted for patient characteristics and for both local wage index and low-volume providers. The Medicare Payment Advisory Commission (MedPAC) has suggested that an adjustment based on volume alone is too broad, thus distance to the nearest provider should also be used to qualify facilities for the low-volume adjustment. The appropriate distance thresholds, and any ameliorating factors, remain open policy questions. As policy makers assess the issue, it will be important to ensure that changes do not add to the already substantial travel burden experienced by rural dialysis patients.

Directions for Future Investigation.

Future investigations should address the economic and demographic characteristics associated with for-profit service, to ascertain the implications of economic change for future service availability. Additionally, the varying availability of dialysis services across geography causes certain populations to travel farther for care. While an examination across all rural dialysis facilities reveals no marked differences in patient outcomes for rural versus urban patients, it is possible that some subpopulations may be adversely affected by travel burden