Regional variations in kidney care raise questions about spending, says Stanford nephrologist

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The type and intensity of treatment older Americans receive for kidney failure depends on the region where they receive care rather than on evidence-based practice guidelines and patient preferences, according to a study to be published in the July 14 *Journal of the American Medical Association*.

There are pronounced regional differences in treatment practices for older adults with kidney failure, including decisions about starting or stopping dialysis, that don't seem to be explained by differences in patient characteristics, said Manjula Kurella Tamura, MD, senior author of the study and assistant professor of nephrology at the Stanford University School of Medicine.

"Our data seem to suggest that at present these important decisions are heavily influenced by where patients live," added lead author Ann O'Hare, MD, associate professor of nephrology at the University of Washington in Seattle, where the study was conducted.

To examine geographic variations in health-care delivery among older patients with kidney failure, researchers used a registry to identify patients age 65 or older who started dialysis between 2005 and 2006. They then grouped the patients into geographic regions based on the average level of health-care spending in that region at the end of life. The ranking of geographic regions according to health-care spending, or

intensity of care, at the end of life comes from the Dartmouth Atlas of Healthcare.

In regions with high-intensity end-of-life care, the study found a higher density of nephrologists — physicians specializing in kidney disease — and higher rates of kidney failure treated with chronic dialysis, especially among the very elderly. Despite a higher density of nephrologists in high-intensity regions, patients with kidney failure were less likely to have seen a nephrologist before starting dialysis.

What's more, said Kurella Tamura, "People who live in these high-spending areas don't tend to fare any better than the low-spending areas."

Among patients who died, they also found that patients who lived in high-intensity regions were more likely to die in the hospital and less likely to have used hospice care.

"The regional differences were most pronounced for very elderly patients age 85 and over, a group for whom the benefits of dialysis are least certain," said O'Hare.

"Although our study wasn't designed to identify the reasons for these variations, the patterns we observed are consistent with previous studies examining geographic variations in treatment practices for other conditions. The findings seem to suggest that higher-spending regions have a more interventional, aggressive style of practice at the end of life," Kurella Tamura said.

As the federal government has enacted health-care reform over the last two years, there has been much debate about the size and nature of regional variations in health-care spending, particularly for a variety of treatments at the end of life. The outcome of this debate could affect the nation's ability to rein in spiraling medical costs: If some regions are

truly practicing medicine in a more cost-effective manner — without compromising quality — it means that savings could be achieved by other regions adopting those best practices.

This was one of the motivating factors for conducting the study, Kurella Tamura said.

"Treatment practices tend to vary the most around interventions that are of uncertain benefit. Chronic dialysis is expensive and invasive, and the benefits of chronic dialysis are least certain in the elderly. So Dr. O'Hare and I wondered whether treatment practices for kidney failure varied in this way also," Kurella Tamura said.

Apparently, they do.

Americans over the age of 80 are the fastest-growing segment of population to start dialysis, which costs Medicare about $100,000 the first year. Within the United States, 400,000 patients receive dialysis treatments. Most commonly, dialysis treatments involve periodically circulating a patient's blood through an artificial kidney machine as a way to remove waste products from the blood when the kidneys fail. Patients have to travel to and from dialysis centers for their treatments, typically three times a week for three to four hours per treatment.

The decision of when to start and stop receiving dialysis can be a difficult one, researchers said, and highlights a need for better training of kidney specialists and other health-care professionals in end-of-life care and support from their colleagues in geriatric and palliative care.

"We need to get serious about optimizing end-of-life care," Kurella Tamura said. "We need to make sure all patients are getting care that matches their preferences and values rather than care that is simply a reflection of where they live."

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