

# New study evaluates transcatheter dialysis conduit procedures over 15 years

May 30 2019

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A new research study by Harvey L. Neiman Health Policy Institute found that utilization of invasive procedures on hemodialysis conduits—artificially constructed shunts used by many individuals who require dialysis—increased markedly from 2001 through 2015 for nephrologists and declined for radiologists. The study is published online in the *Journal of Vascular and Interventional Radiology (JVIR)*.

The researchers used aggregated Centers for Medicare and Medicaid Services claims data to identify recent temporal trends in the use of hemodialysis conduit angiography and thrombectomy procedures at both the national (2001-2015) and state (2004-2015) levels, as well as by specialty and site of service.

"Using both national aggregate and beneficiary level Medicare claims data, we longitudinally expanded on prior work studying trends in dialysis conduit interventions," said first author Matthew Chiarello radiology resident at NYU Langone Health. "Since 2001, we discovered that there has been a substantial growth nationally in hemodialysis conduit angiography utilization, with lesser growth in thrombectomy utilization."

Chiarello and his colleagues found that procedure growth was particularly rapid for hemodialysis angiography utilization, which increased from 385 to 1,045 per 100,000 beneficiaries. Thrombectomy utilization increased from 114 to 168. The largest shift for angiography and thrombectomy by specialty was for nephrologists (+24.0% and

+17.7%) and surgeons (+18.4% and +14.4 %.). This increased growth is also accompanied by a drastic shift in where these services were performed. The percentage of procedures performed annually in the office setting increased by 29 percent for angiography and 21 percent for thrombectomy. Across states in 2015, there was marked variation in utilization of angiography from zero in WY to 1,173 in GA and thrombectomy was zero in 6 states to 275 in RI. Radiologists' angiography and thrombectomy market shares decreased in 48 and 31 states, in some instances dramatically (e.g., angiography in NV, from 100.0% to 6.7%).

"Our results have shown that dialysis conduit [angiography](#) utilization has grown substantially, more so than [thrombectomy](#)," noted Andrew Rosenkrantz, MD, MPA, senior author and a Neiman Institute affiliate senior research fellow. "This growth has been accompanied by a drastic market shift from radiologists in hospitals to nephrologists and surgeons in offices and despite wide geographic variability nationally, radiologist market share has declined in most states."

**More information:** Matthew A. Chiarello et al. Transcatheter Dialysis Conduit Procedures: Changing National and State-Level Medicare Use Patterns over 15 Years, *Journal of Vascular and Interventional Radiology* (2019). [DOI: 10.1016/j.jvir.2019.03.019](https://doi.org/10.1016/j.jvir.2019.03.019)

Provided by Harvey L. Neiman Health Policy Institute

Citation: New study evaluates transcatheter dialysis conduit procedures over 15 years (2019, May 30) retrieved 23 November 2023 from <https://medicalxpress.com/news/2019-05-transcatheter-dialysis-conduit-procedures-years.html>

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