

## For stroke prevention, large medical centers may have the edge

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Despite advances in the diagnosis and treatment of unruptured brain aneurysms, outcomes have remained stagnant over the last 10 years. This can be explained by the dramatic proliferation of minimally invasive endoscopic coiling procedures at lower-volume community hospitals, where outcomes are inferior.

These findings are reported in a study by neurologists, neurosurgeons and neuro-anesthesiologists at NewYork-Presbyterian Hospital/Columbia University Medical Center and published in the journal *Stroke*.

"This isn't a problem with technology but rather the way it has been delivered," says study co-author Dr. Robert A. Solomon, neurosurgeon-in-chief at NewYork-Presbyterian Hospital/Columbia University Medical and the Byron Stookey Professor of Neurological Surgery and chairman of the Department of [Neurological Surgery](#) at Columbia University College of Physicians and Surgeons. "Endoscopic coiling has been hugely helpful for the vast majority of patients, and it has actually been shown to have the potential for better outcomes relative to open surgery. It just hasn't improved the overall picture, at least in New York state, where we focused our study."

The authors say the increased popularity of coiling in smaller [community hospitals](#) may stem from the perceived ease of doing the procedure as well as cost concerns, with poor outcomes the result of technical shortcomings or errors in judgment. For instance, community hospitals

may choose to perform the procedure on smaller aneurysms despite attendant risks, in part because they lack access to [neurosurgeons](#) trained in microsurgical clipping (see below for an explanation of the two treatment options).

Boosting overall outcomes, the authors say, will take a return to greater centralization of care at [academic medical centers](#) such as New York-Presbyterian Hospital/Columbia University Medical Center. "Centers that offer comprehensive cerebrovascular care with both surgical and endovascular capabilities are best equipped to make treatment decisions based on what's best for the patient," says Dr. Solomon.

The research team compared hospital discharges for unruptured intracranial aneurysms (UIAs) identified via the New York Statewide Database (SPARCS) in two time periods: 2005 to 2007 and 1995 to 2000. They found that since 1995, there has been a six-fold increase in the treatment of UIAs driven almost completely by coiling at smaller community hospitals, while outcomes have remained flat.

Surprisingly, they also found that overall outcomes for traditional surgical clipping worsened. This too can be explained by the proliferation of the minimally invasive approach, say the authors. With most cases being treated with coiling, the cases referred to surgery are increasingly complex. At the same time, there has been less training and practice for cerebrovascular surgeons.

Provided by New York- Presbyterian Hospital

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