

*Stroke Thrombectomy Service and  
Recent Provider Trends in U.S.  
Medicare Beneficiaries*

# *Stroke Thrombectomy Service and Recent Provider Trends in U.S. Medicare Beneficiaries*

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# Disclosures

Keshav Jayaraman - None

Stefan Santavicca - None

Danny R. Hughes - Harvey L. Neiman Health Policy Institute

Joshua A. Hirsch - Medtronic, Neiman Health Policy Institute, Persica, Relevant

Richard Duszak Jr. - Ethos Medical, Inc.

Arindam R. Chatterjee - None

# Purpose

- Five separate randomized clinical trials in support of endovascular mechanical thrombectomy for acute ischemic stroke with large vessel occlusion presenting within six hours were published in 2015<sup>1</sup>.
- In light of this new evidence, we used Medicare provider-level billing data to study trends in thrombectomy services in the years following these trials

Positive Trials				
MR CLEAN	ESCAPE	REVASCAT	SWIFT PRIME	EXTEND IA
LVO on CTA/MRA	Small infarct core by ASPECTS, collateral vessels on CTA, LVO on CTA	Small infarct core by ASPECTS, LVO on vessel imaging (mostly CTA)	Small infarct core by PWI and also by ASPECTS, LVO on vessel imaging	Small infarct core by PWI, LVO on CTA
↓	↓	↓	↓	↓
Medical vs endovascular (IA tPA, mechanical thrombectomy with mostly stent retrievers)	Medical vs endovascular (mechanical thrombectomy with mostly stent retrievers)	Medical vs endovascular (mechanical thrombectomy with Solitaire stent retrievers)	Medical vs endovascular (mechanical thrombectomy with Solitaire stent retrievers)	Medical vs endovascular (mechanical thrombectomy with Solitaire stent retrievers)

From: Patel VP, Heit JJ. Ischemic stroke treatment trials: neuroimaging advancements and implications. Topics in Magnetic Resonance Imaging. 2017 Jun 1;26(3):133-9.

Clinical trials support benefit of stroke thrombectomy

warranting

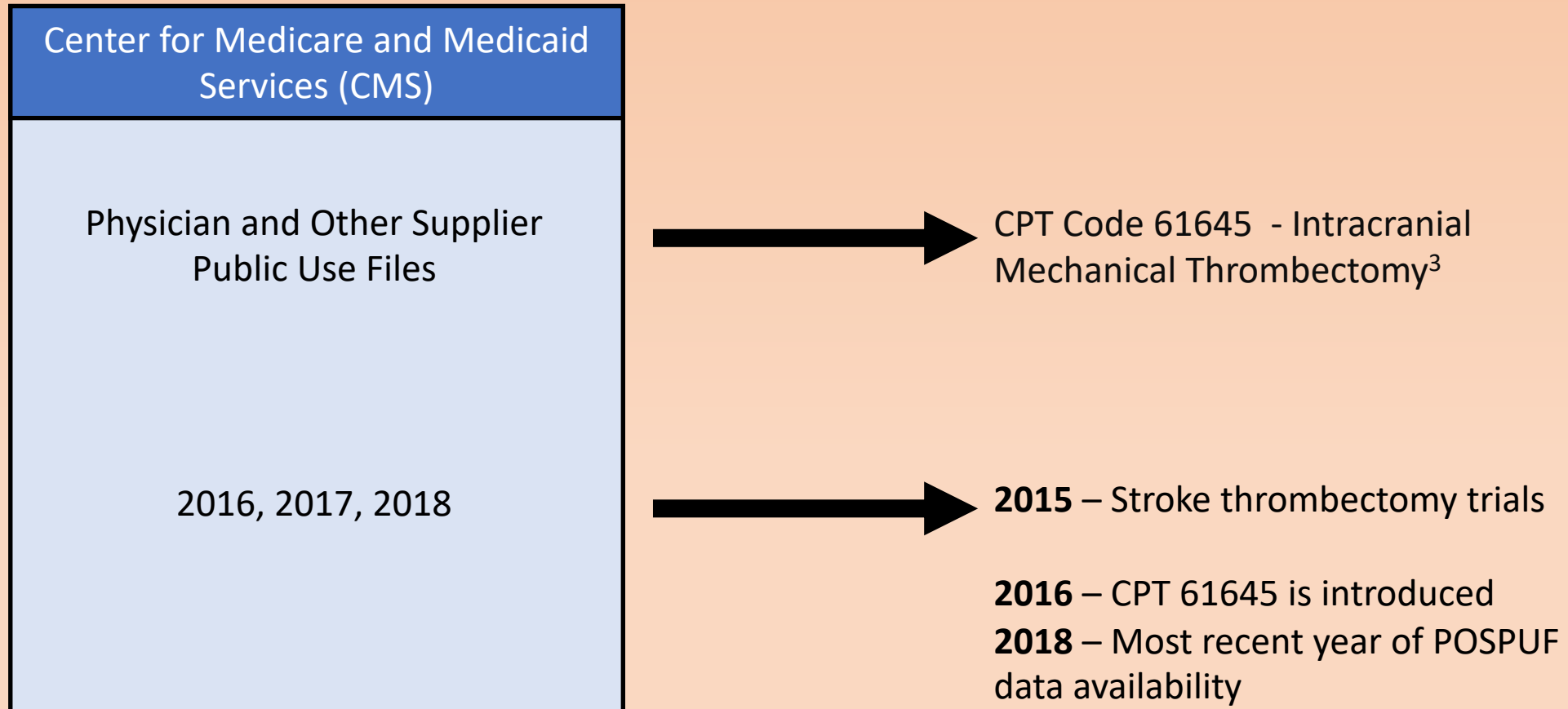
characterization of subsequent trends in thrombectomy providers

to empower

informed workforce planning

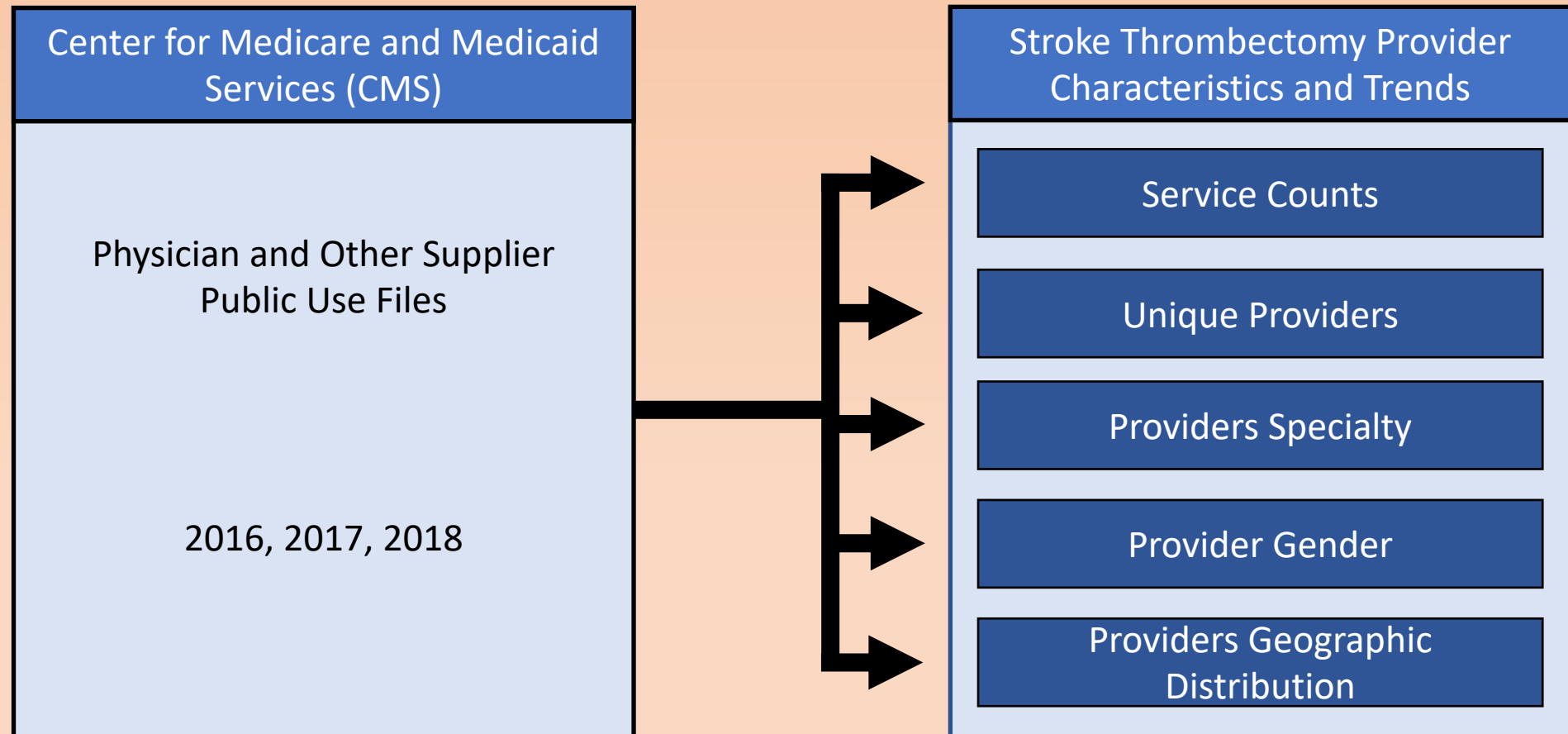
# Methods

- Most recent (2016-2018) Medicare Physician and Other Supplier Public Use Files (POSPUF)<sup>2</sup> were used to identify physicians billing >10 services of the new mechanical thrombectomy CPT code 61645 introduced in 2016.
- Only providers billing for >10 are included in POSPUF to prevent linking individual patients with specific providers.



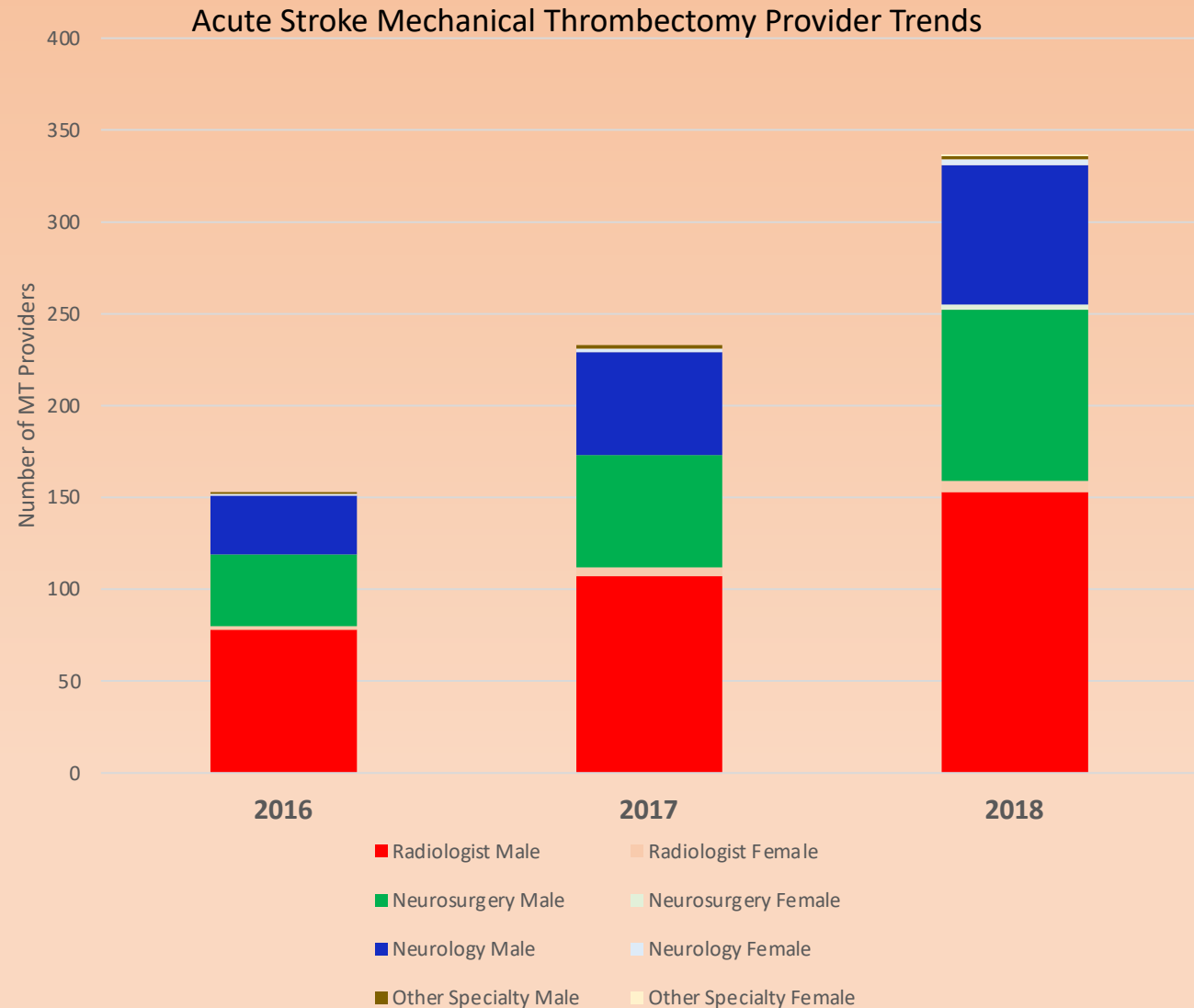
# Methods

Provider gender, specialty, and geographic information were analyzed.

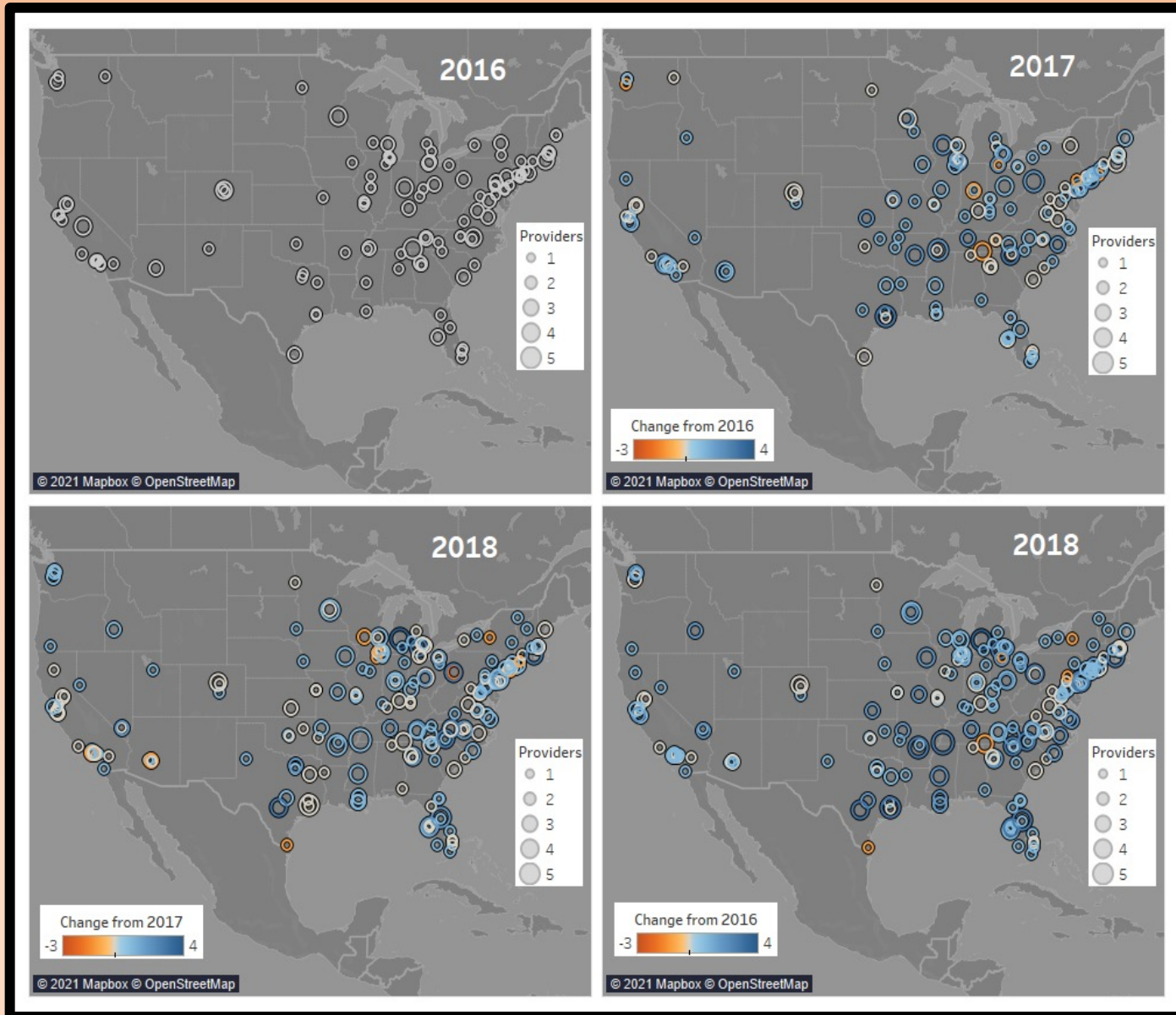


# Results

- For 2016, 2017, and 2018, mechanical thrombectomy procedures billed for Medicare beneficiaries rose from 2,483 to 4,139 to 6,413 (+158%) as the number of providers rendering >10 services per year rose from 153 to 233 to 337 (+120%).
- Of those providers, 2%, 3%, and 4% were women, respectively.
- Radiologists declined from 52% to 48% to 47% as neurosurgeons rose 25% to 26% to 28% and neurologists remained relatively stable from 22% to 25% to 23%.



# Results



The associated heat maps (Figure 1) demonstrate that while identified mechanical thrombectomy providers are largely concentrated in the eastern United States from 2016 to 2018, growth in the number of providers over this timeframe is occurring more diffusely.



# Conclusions

- 1) Following a series of landmark clinical trials published in 2015<sup>1</sup>, the use of mechanical thrombectomy for acute stroke in Medicare beneficiaries increased substantially
- 2) There was an increase as well in the number of physicians more frequently rendering such services.
- 3) Across all three years, identified providers represent a variety of specialties but are predominantly male and located in the eastern United States.

# References

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