

Provider Characteristics of Stroke Thrombectomy Services for Medicare Beneficiaries

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Introduction

Acute Ischemic Stroke (AIS) requires significant public health considerations given the disease's narrow treatment window. Access to emergent care requires diverse analyses of the distribution of providers across geographical space¹.

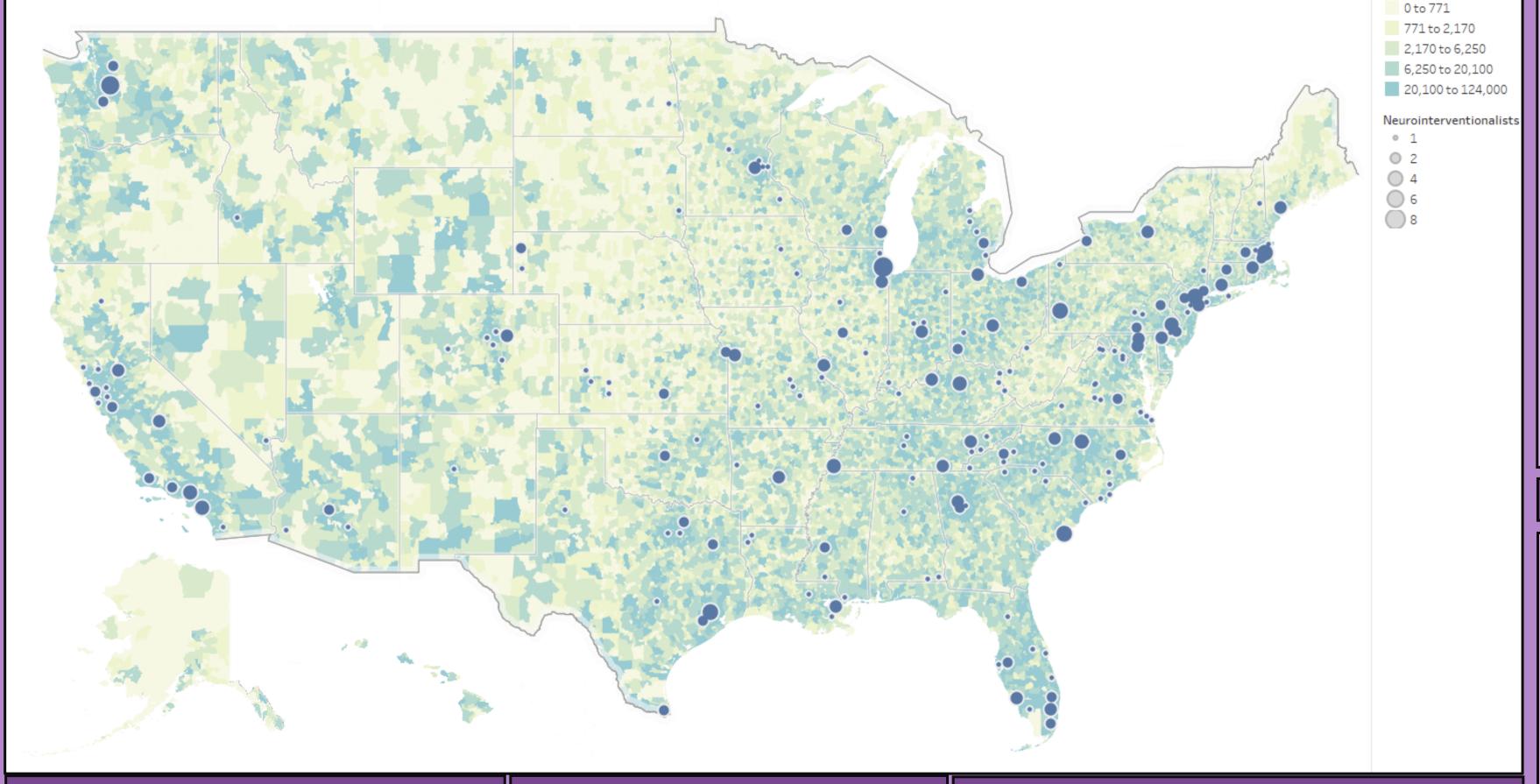
As indications broaden for thrombectomy in AIS with advances in technology, the demand for these services continue to increase².

Our multi-institutional team analyzed high-volume thrombectomy service provider geographic distribution, population-density correlation and characteristics through the use of a database linking Physician Compare with Medicare Physician and Other Supplier Public Use Files ³.

Methods

- A dataset linking Medicare Physician Compare and Physician and Other Supplier Public Use Files (POSPUF) was utilized for this analysis.
- We define *high-volume thrombectomy providers* as physicians billing over 10 stroke thrombectomy procedures for Medicare beneficiaries in 2016 or 2017.
- The Current Procedural Terminology (CPT) code 61645 (intracranial thrombectomy) was used to identify these providers in our linked database.
- Unique National Provider Identifiers (NPI) were linked to their largest practice size.
- Heat map generated with Tableau. Data analysis with Excel.







Next Steps

- Population as our primary indicator of demand may not represent true access to care. We wish to perform a more detailed analysis of AIS demand with respect to geographic distribution and population characteristics.
- In this analysis, we investigate high-volume thrombectomy providers. We wish to additionally investigate low-volume provider characteristics and geographic distribution.

References

- 1. Adeoye O, Albright KC, Carr BG, et al. Geographic access to acute stroke care in the United States. *Stroke*. 2014;45(10):3019-3024. doi:10.1161/STROKEAHA.114.006293
- 2. MacKenzie IER, Moeini-Naghani I, Sigounas D. Trends in Endovascular Mechanical Thrombectomy in Treatment of Acute Ischemic Stroke in the United States. *World Neurosurg*. 2020;138:e839e846. doi:10.1016/j.wneu.2020.03.105
- 3. Rosenkrantz AB, Hughes DR, Duszak R Jr. Medicare Claims Data Resources: A Primer for Policy-Focused Radiology Health Services Researchers. *J Am Coll Radiol*. 2017;14(12):1538-1544. doi:10.1016/j.jacr.2017.04.005