

Abstract E-070 Figure 1

prevalence, mortality, and disability-adjusted life years (DALYs) from 2010–2019 were extracted and compared across US regions. We assessed the impact of increased mechanical thrombectomy use by comparing deaths and DALYs from ischemic stroke between 2010–2014 and 2015–2019 using a mixed-effects model. The attributable, age-standardized DALYs for twenty risk factors were estimated by sex, ranked by state, and trended.

Results Incident ischemic strokes decreased by 11.4% across the study period from 65.7 (55.9–77.3) to 58.2 (49.0–69.5) per 100,000 population. We observed declining rates of ischemic stroke prevalence (-8.2%), mortality (-1.9%), and DALYs (-4.4%,). All regions experienced decreases in all burden measures across the study period, with the South exhibiting the highest burden across all years. The South experienced the most significant reductions in ischemic stroke incidence (-12.6%) and prevalence (-10.5%) with marginal reductions in deaths (-1.5%). Deaths (-0.334 (-0.411 to -0.258), $p < .0001$) and DALYs (-6.30 (-7.85 to -4.75), $p < .0001$) significantly differed between the pre- and post-mechanical thrombectomy eras. Total attributable DALYs for all risk factors decreased from 304.7 (95% CI: 258.5–353.2) in 2010 to 288.9 (95% CI: 242.2–337.2) per 100,000 in 2019. In 2019, hypertension, hyperglycemia, and obesity were the leading risk factors for attributable DALYs, with no differences between states. DALYs attributable to leading risk factors decreased among men but showed a lesser decrease or an increase among women (table 1). DALYs attributable to ambient particulate matter exposure (-32.6%), low physical activity (-22.3%), and lead exposure (-20.8%) notably decreased.

Conclusions The national and regional burden of ischemic stroke decreased during the study period. Deaths and DALYs decreased in 2015–2019 compared to 2010–2014, suggesting a mitigating effect of mechanical thrombectomy. While DALYs attributable to leading risk factors decreased, sex-based disparities were observed.

Disclosures A. Ganga: None. M. Jayaraman: None. S. Santos Fontanez: None. K. Moldovan: None. R. Torabi: None. D. Wolman: 2; C; Cerenovus Stroke Solutions.

E-071 BEYOND COILING: A COMPARATIVE ANALYSIS OF NEURO-INTERVENTIONALIST PREFERENCES FOR ANEURYSM OCCLUSION

S Salwi*, T Tudor, O Shekhtman, G Sioutas, I Matache, M Salem, A Corral Tarbay, S Ajmera, S Kandregula, J Burkhardt, V Srinivasan. *Neurosurgery, University of Pennsylvania Philadelphia, Philadelphia, PA*

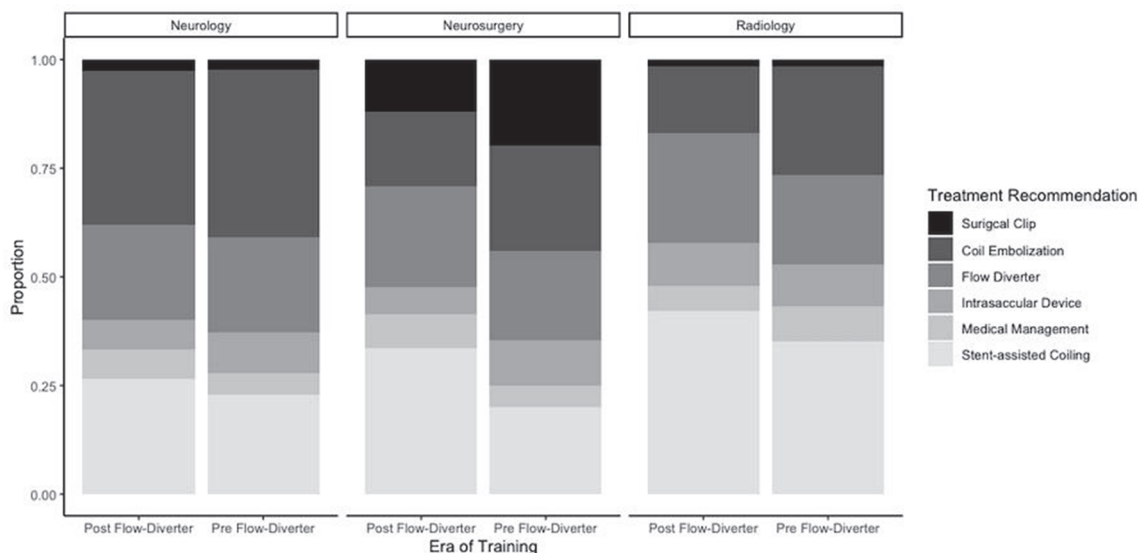
10.1136/jnis-2024-SNIS.176

Background Aneurysm treatment options are rapidly involving with the introduction of flow diversion and intra-saccular devices. Prior studies have explored interventionalist preferences for more general surgical vs. endovascular intervention. However, it is unknown how interventionalists decide between various endovascular options for difficult-to-treat aneurysms.

Methods A survey-based study was conducted to investigate the variation in treatment recommendations for ruptured and

Abstract E-071 Table 1 Top four treatment recommendations for ruptured aneurysm occlusion stratified by specialty

Treatment (n,%)	Neurology (n = 165)	Neurosurgery (n = 242)	Radiology (n = 368)	p-value
Coil Embolization	86 (52.1)	103 (42.6)	126 (34.2)	<0.001
Flow Diverter	19 (11.5)	18 (7.4)	25 (6.8)	
Intrasaccular Device	19 (11.5)	36 (14.9)	41 (11.1)	
Stent-assisted Coiling	41 (24.8)	85 (35.1)	176 (47.8)	



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unruptured aneurysms among neurosurgeons, neurologists, and radiologists. Participants were presented with clinical vignettes and asked to choose preferred treatment options. Then responses analyzed based on standard clinician and practice specific variables. We additionally explored how training prior to and after the introduction of flow diverters affected the decision to use these devices.

Results A total of 108 respondents completed the study with a representative mix of specialties - (45 (42.5%) radiologists, 22 (20.8%) neurologists, and 39 (36.8%) neurosurgeons). The majority of physicians ($n = 66$, 61.1%) trained after the introduction of flow diversion so ostensibly learned to use these in fellowship. Notably, treatment recommendations when looking at the answers to all questions in aggregate were significantly different by specialty ($p < 0.001$). The agreement between respondents for treating ruptured v unruptured and anterior v posterior aneurysms was overall poor ($K=0.07$) to fair (0.21) highlighting the significant variation in practice. Treatment of ruptured aneurysms varied by specialty with radiologists opting for stent assisted coiling at a higher rate than neurologists or neurosurgeons ($p < 0.001$). There was no significant difference in rates of recommending flow diversion or intracascular devices between those that had trained before and after their introduction ($p = 0.97$). Likely interventionalists are a self-selecting group of people that are early adopters of new technology with the comfort and desire to incorporate these into their practice. Training at a time when these devices were not yet in use did not deter them from considering these techniques for aneurysm occlusion. This dynamism is reflected throughout the field as new devices and techniques are rapidly tested and adopted.

Conclusion The study highlights the dynamic nature of aneurysm management and considerable variability among different specialties.

Disclosures S. Salwi: None. T. Tudor: None. O. Shekhtman: None. G. Sioutas: None. I. Matache: None. M. Salem: None. A. Corral Tarbay: None. S. Ajmera: None. S. Kandregula: None. J. Burkhardt: None. V. Srinivasan: None.

E-072

BALLOON-MOUNTING STENT VERSUS BALLOON ANGIOPLASTY FOR INTRACRANIAL ARTERIAL STENOSIS: A SYSTEMATIC REVIEW AND META-ANALYSIS

¹B Musmar*, ²J Abdelgadir, ²S Spellicy, ²A Zomorodi, ¹P Jabbour, ²D Hasan. ¹Neurological Surgery, Thomas Jefferson University Hospital, Philadelphia, PA; ²Neurological Surgery, Duke University Hospital, Durham, NC

10.1136/jnis-2024-SNIS.177

Background Intracranial artery atherosclerotic stenosis (ICAS) is a major cause of stroke, especially in Asian countries. Current treatment options, including balloon-mounted stent (BMS) and balloon angioplasty (BA), lack sufficient evidence to determine a preferred approach. This systematic review and meta-analysis aimed to compare the efficacy and safety of BMS and BA in treating ICAS.

Methods Following PRISMA 2020 guidelines, we conducted a comprehensive search in PubMed, Web of Science, and Scopus up to December 1, 2023. Eligible studies compared BMS with BA in patients diagnosed with ICAS. Primary outcomes included the success rate and occurrence of stroke (ischemic or hemorrhagic). Secondary outcomes were perforator occlusion, in-stent thrombosis, death, and restenosis. Statistical analysis was conducted using R software version 4.3.1, employing a random-effects model.

Results Five high-quality studies involving 707 patients (515 males, 192 females) were included. BMS had a significantly higher success rate compared to BA (Risk Ratio [RR]: 1.13; CI: 1.03 to 1.24, $p < 0.01$; $I^2 = 14\%$). The overall risk for stroke (ischemic and hemorrhagic) was significantly higher in BMS (RR: 2.97; CI: 1.32 to 6.67, $p < 0.01$; $I^2 = 0\%$). However, no significant difference was found between BMS and BA regarding ischemic stroke (RR: 2.33; CI: 0.80 to 6.74, $p = 0.12$; $I^2 = 0\%$). Additionally, no significant differences were observed in terms of perforator occlusion, in-stent thrombosis, dissection, minor and major strokes, and mortality rates. BMS was associated with a lower risk of restenosis (RR: 0.31; 95% CI: 0.12 to 0.83, $p = 0.02$; $I^2 = 0\%$).