41663. Strength of Evidence in the Neurosurgical Literature.
No Power in the Numbers

- Ephraim W. Church MD, Nicholas J. Brandmeir MD (2), Lekhaj C. Daggubati MD, Justin R. Davanzo MD, Robert Zeichmann BA, Jessica R. Lane MD, Christine Mau MD, Russell Payne MD, Pratik Rohatgi MD, Sandip Savaliya MD, Abraham Schlauderaff MD, Emily P. Sieg MD, Samer G. Zammar MD, Robert E. Harbaugh MD, Michael J. Glantz MD
- Department of Neurosurgery, Penn State Health
- Department of Neurosurgery, West Virginia University
Disclosures

• None
Introduction

- Despite increasing awareness of the importance of evidence based decision making in neurosurgery as evidenced by journal clubs, guidelines committees, and training courses specifically aimed at evidence based neurosurgery, the quality of evidence in neurosurgery journals appears low.
- We quantified the level of evidence (LOE) in a recent large cohort of neurosurgery articles and investigated potential correlates of high quality publications.
Methods

• All articles published in the Journal of Neurosurgery and Neurosurgery between October 2016 and March 2017 were reviewed.

• LOE was assigned using CONSORT, STARD, PRISMA, and American Academy of Neurology reporting standards.

• Data regarding subspecialty focus, industry sponsorship, and number of citations were also extracted.
Results

• Three hundred articles were identified, and 152 containing a statistical comparison were graded.

• Six (2%) were level I, 21 (7%) were level II, 82 (27%) were level III, 43 (14%) were level IV, and 148 (49%) were ungradable (technical notes, case reports, or other). These numbers have remained static over the last two decades.

• Functional neurosurgery was associated with an increased likelihood of producing a level IV study.

• Subspecialty and LOE were not associated with number of citations.

• Industry sponsorship was weekly and negatively correlated with citation number (r=-0.026, p=0.049).
Summary

• The level of evidence of publications in major neurosurgical journals remains low, and quality of evidence did not impact the frequency of citations.
• Mandated reporting of LOE with published articles may help, but to truly improve the quality of evidence, neurosurgeons must continue to educate themselves on the principles, and embrace the value of evidence-based medicine.