

Henry Ford Health

## Henry Ford Health Scholarly Commons

---

Neurosurgery Articles

Neurosurgery

---

7-22-2021

### In Reply: Contemporary Analysis of Minimal Clinically Important Difference in the Neurosurgical Literature

Thomas M. Zervos

*Henry Ford Health*, TZERVOS1@hfhs.org

Karam Asmaro

*Henry Ford Health*, KASMAR02@hfhs.org

Ellen L. Air

*Henry Ford Health*, eair1@hfhs.org

Follow this and additional works at: [https://scholarlycommons.henryford.com/neurosurgery\\_articles](https://scholarlycommons.henryford.com/neurosurgery_articles)

---

#### Recommended Citation

Zervos TM, Asmaro K, and Air EL. In Reply: Contemporary Analysis of Minimal Clinically Important Difference in the Neurosurgical Literature. *Neurosurgery* 2021.

This Article is brought to you for free and open access by the Neurosurgery at Henry Ford Health Scholarly Commons. It has been accepted for inclusion in Neurosurgery Articles by an authorized administrator of Henry Ford Health Scholarly Commons.

## In Reply: Contemporary Analysis of Minimal Clinically Important Difference in the Neurosurgical Literature

To the Editor:

The authors<sup>1</sup> raise an important point regarding the type of change that can and should be considered when determining the minimal clinically important difference (MCID) for a treatment and patient population. Although the primary examples highlighted in our publication<sup>2</sup> focused on absolute values for the individual patient reported outcome measures (PROMs), percent change can also be used as an MCID. As noted, this can increase an MCID's sensitivity, particularly for patients who score at the extremes of an outcome measure.<sup>3,4</sup> However, anchoring patient satisfaction to an arbitrarily chosen percent change overlooks the "minimal" in MCID. Had the receiver operating characteristic (ROC) curve been run across the continuum, the MCID might have been 25%, or even 35%. The spinal cord stimulation literature, which long has referenced an arbitrary benchmark of 50% pain reduction, exemplifies the need to identify the appropriate threshold that connotes treatment value.<sup>5</sup>

For the benefit of our patients, it remains important to find a balance between disease-specific PROMs and neurosurgical PROMs. Disease-specific PROMs such as the Health-Related Quality of Life Measure for Children with Epilepsy (CHEQoL) bring the patient's daily concerns, such as a child's fear of being treated differently, to the surgeon's attention in a way that neurosurgical-specific PROMs may not.<sup>6</sup> Similarly, the Chicago Chiari Outcomes Score (CCOS) is a neurosurgery-specific PROM that incorporates the impact of complications on patient outcome—a connection that may not be obvious to patients.<sup>7</sup> As a field, we do not want to be short-sighted and trade one set of limitations for another. Rather, using and developing the appropriate complement of PROMs for specific neurosurgical situations will best serve our patients in the future.


Access to full text was obtained through Henry Ford Health Systems library resources.

### Funding

This study did not receive any funding or financial support.

### Disclosures

The authors have no personal, financial, or institutional interest in any of the drugs, materials, or devices described in this article.

**Thomas M. Zervos, MD**  
**Karam Asmaro, MD**  
**Ellen L. Air, MD, PhD**   
*Department of Neurosurgery*  
*Henry Ford Health System*  
*Detroit, Michigan, USA*

### REFERENCES

1. Rahman R, Rahman S, Ghani H, Rahman MM. Letter: contemporary analysis of minimal clinically important difference in the neurosurgical literature [published online ahead of print: 2021]. *Neurosurgery*. doi:10.1093/neuros/nyab260.
2. Zervos TM, Asmaro K, Air EL. Contemporary analysis of minimal clinically important difference in the neurosurgical literature. *Neurosurgery*. 2021;88(4):713-719.
3. Khan I, Pennings JS, Devin CJ, et al. Clinically meaningful improvement following cervical spine surgery: 30% reduction versus absolute point-change MCID values. *Spine (Phila Pa 1976)*. 2021;46(11):717-725.
4. Asher AM, Oleisky ER, Pennings JS, et al. Measuring clinically relevant improvement after lumbar spine surgery: is it time for something new? *Spine J*. 2020;20(6):847-856.
5. Paul AR, Kumar V, Roth S, Gooch MR, Pilitsis JG. Establishing minimal clinically important difference of spinal cord stimulation therapy in post-laminectomy syndrome. *Clin Neurosurg*. 2017;81(6):1011-1015.
6. Ronen GM, Streiner DL, Rosenbaum P. Health-related quality of life in children with epilepsy: development and validation of self-report and parent proxy measures. *Epilepsia*. 2003;44(4):598-612.
7. Aliaga L, Hekman KE, Yassari R, et al. A novel scoring system for assessing Chiari malformation type I treatment outcomes. *Neurosurgery*. 2012;70(3):656-665.

© Congress of Neurological Surgeons 2021. All rights reserved. For permissions, please e-mail: [journals.permissions@oup.com](mailto:journals.permissions@oup.com)

<https://doi.org/10.1093/neuros/nyab266>