Letter by Stinear and Byblow Regarding Article, “Patient-Reported Measures Provide Unique Insights Into Motor Function After Stroke”

To the Editor:

We read with interest the recent article by Stewart and Cramer1 that illustrated the importance of measuring motor function, not just impairment and disability, after stroke. These authors report results from 43 people who had experienced stroke between 5 days and 9.4 years before assessment. Global measures of disability (modified Rankin Scale) and impairment (National Institutes of Health Stroke Scale) were made, as well as measures of impairment specific to the upper limb (Fugl-Meyer [FM] scale and Purdue pegboard test). Patient-reported measures of upper limb function were also made: the difficulty of hand use (hand domain of the Stroke Impact Scale [SIS]) and amount of affected arm use (Motor Activity Log [MAL]). Nearly two-thirds of patients with minimal or no disability or impairment measured with the modified Rankin Scale, National Institutes of Health Stroke Scale, or FM scale reported difficulty with hand movements or reduced arm use. This is an important reminder that patients who are able to pass an assessment of disability and upper limb impairment can still experience considerable difficulty when attempting to use the affected upper limb in daily activities, which, in turn, reduces their use of the limb for these activities. It also highlights the limitations of using global measures, such as the modified Rankin Scale and National Institutes of Health Stroke Scale, as trial end points for treatments aimed at specific domains, such as motor function.

However, another interesting aspect of the data set went without comment. The impairment threshold for regaining use of the affected upper limb in activities of daily living seems to be a score of ≥55 of 66 on the FM scale. Although patients with FM scores between 25 and 55 did use their affected upper limb for some activities, they did so rarely and with great difficulty. Patients with FM scores <25 simply did not use their affected upper limb. These data, if confirmed by other studies, could provide meaningful and realistic rehabilitation targets. For example, the goal of achieving an FM score of ≥55 could be set for subacute patients with notable potential for the recovery of upper limb function,2 to ensure they can and will use their affected upper limb in activities of daily living after discharge from rehabilitation. Conversely, the goal of achieving an FM score of ≥25 could be set for patients with limited potential for the recovery of upper limb function,2 so that they can and will use their affected upper limb to a limited extent after discharge, albeit with considerable difficulty. Understanding the impairment thresholds that need to be crossed for patients to regain some or most of their prestroke level of upper limb use could also assist with the management of expectations for patients, their families, and therapists.

Disclosures

None.

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References

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