



Editorial



A New Possible Standard in Evaluating Lower Extremity Motor Weakness

James M. Parrish, Nathaniel W. Jenkins, Kern Singh

Department of Orthopaedic Surgery, Rush University Medical Center, Chicago, IL, USA

Corresponding Author

Kern Singh

E-mail: kern.singh@rushortho.com

<https://orcid.org/0000-0002-6118-7273>

Department of Orthopaedic Surgery, Rush University Medical Center, Chicago, IL, USA

See the article "Lower Extremity Motor Deficits Are Underappreciated in Patient-Reported Outcome Measures: Added Value of Objective Outcome Measures" via <https://doi.org/10.14245/ns.1938368.184>.



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With the progression of value-based care, objective patient evaluation is critical. Efforts to capture clinical improvement in a patient-focused manner is becoming more possible with patient-reported outcome measures (PROMs). Legacy metrics for patients with low back pain appraise pain (visual analogue scale, VAS), disability (Oswestry Disability Index, ODI), and health-related quality of life (Euro-Qol 5D [EQ-5D], 12-item Short Form [SF-12]). These surveys have been rigorously investigated at pre- and postsurgical time points in patients undergoing spine surgery. Newer metrics such as the Patient-Reported Outcomes Measurement Information System (PROMIS),¹ an National Institutes of Health funded nondisease specific instrument, have provided time-efficient patient evaluations through the use of Computer Adaptive Tests (CAT). Recent investigation demonstrates that PROMIS has outperformed legacy metrics in the spine patient population.² All survey instruments rely on patient compliance and are meaningless if patients do not complete them, which continue to be a challenge for clinicians and researchers.

In their study, Stienen et al.³ compared the performance of an objective test of function, Timed-Up and Go (TUG), to legacy PROMs such as VAS, ODI, RMDI, SF-12, and EQ-5D, for evaluating lower extremity motor deficits (LEMDs). Objective tests of function, such as TUG, are underrepresented in spine literature, although, they provide potential synergistic value with subjective patient-reported outcomes. Instruments that may be used to objectively measure patient function include accelerometers, dynamometers, and spatiotemporal gait parameters. Although all useful tools, their cost and logistical requirement (time, training, and equipment) result in their limited utility in the clinic. The standardized measurement of TUG can easily be applied in the clinic using a wristwatch, adding little burden to clinicians.

When appraising the results of this study, readers should consider the possibilities it offers for further research. The study excluded patients with a history of LEMD from significant nonspine comorbidities such as hip or knee osteoarthritis (OA). Lumbar degenerative disc disease is oftentimes not an isolated disease and may coexist with other musculoskeletal degenerative processes. The progression of degenerative disc disease has been associated with OA of the knee,⁴ therefore, the investigation of these complex subpopulations would help bring more generalizability to the results.

Given the wide array of patient expectations, preferences, and measures that are a part of the surgical patient experience, the authors rightly propose TUG as a survey that fills a void for important information other PROMs cannot capture. TUG is also unique in its simplicity—circumventing the need for adding another time-consuming survey. Many typically

administered patient-reported outcomes (PROs) record overlapping information. Commonly used PROs can be thought of as pertaining to pain, disability, quality of life, and psychological symptoms. Magnitude of pain can be assessed as VAS or the numerical rating scale. Pain can also be extracted as part of other surveys such as EQ-5D and SF-36, Veterans RAND 36 Item Health Survey (VR-36), SF-12, or VR-12. Other outcome measures focus on disabilities related to a condition or disease-specific criteria. For example, lower back disability can be assessed with the ODI, Roland-Morris Questionnaire, or the Quebec Back Pain Disability Scale.^{5,6} While each of these has its own advantages, many have been observed to correlate significantly with pain, which raises further questions regarding their value at the cost of patient and clinical time expenditure.

Finally, other outcomes focus on more generic evaluations on quality of life, such as the EQ-5D, SF, and VR metrics. Beyond an overall quality of life assessment, these instruments are termed “generic” because they are nondisease specific. The recent development of CAT systems such as PROMIS allows generic instruments to become more efficient, adjusting and limiting questions based on patient response. Other psychological outcome systems have traditionally focused on depressive symptoms, such as the Patient Health Questionnaire-9 and Beck’s Depression Inventory.^{7,8} Anxiety has been investigated with questionnaires such as the Spielberg State Trait Anxiety Inventory and the Hospital Anxiety and Depression Scale.^{9,10} Although we might dismiss these as nonobjective in nature, psychological scores can often correlate with pain avoidance, anxiety, interference with daily life, and overall decreased movement. While the Stienen et al.³ admirably highlight numerous advantages of the TUG, there are a number of other instruments that provide meaningful patient-focused outcome information.

In summary, we praise Stienen et al.³ for demonstrating the capability of the TUG metric in evaluating LEMDs. Further investigation is warranted to determine how TUG correlates with other metrics before we can consider replacing some of our longitudinally validated metrics. Certainly, among a group of patients with possible LEMD, TUG may be more relevant than other PROs. As we consider adding new PRO to our patient evaluation profiles, one of the most relevant challenges will be balancing patient and clinical time-investment along with which instruments provide the most meaningful information for each procedure or pathology.

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Title: Portrait of Ambroise Vollard

Artist: Pablo Picasso

Year: 1910

Ambroise Vollard (1867-1939) was one of the great art dealers of the 20th century. He championed Paul Cézanne, Van Gogh, Renoir, Gauguin and Henri Matisse. He promoted Picasso's blue and rose periods, but he was careful about cubism. When Picasso later returned to a figuration informed by cubist richness and surrealist eroticism, they collaborated on one of Picasso's greatest achievements: his lubricious, mytho-erotic Vollard Suite, 100 engraved plates completed in 1937, culminating in emotional portraits of Vollard, who was to die two years later in a car crash.

In Portrait of Ambroise Vollard, Vollard's downcast eyes, apparently closed, the massive explosion of his bald head, multiplying itself up the painting like an egg being broken open, his bulbous nose and the dark triangle of his beard are the first things the eye latches on to. They are recognisable. At least that's the way your mind, through habit, composes the details into information.

More information: <https://www.pablocicasso.org/portrait-of-ambroise-vollard.jsp>

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