Gait Velocity and Community Ambulation: the Limits of Assessment

To the Editor:

The contention by Schmid and colleagues1 that gait velocity, measured over 10 months, is sufficient as a single measure of community ambulation is not supported by the results of their study. Rather, their data supports earlier research showing that gait speed predicts functional mobility and social participation.2,3 and also indicates that to some extent levels of community ambulation can be discerned by gait velocity. The authors stratified participants into hierarchical levels of community ambulation based on widely reported but unsubstantiated thresholds of gait speed, and reported on the number of people who transitioned to a higher class of community ambulation following an intervention to improve mobility. Community ambulation as a discrete outcome, using self-report, was not measured.

Functional mobility status and social participation, both multidimensional constructs, were assessed using 2 domains of the Stroke Impact Scale (SIS). A correlation was shown between improved SIS scores and transition to a higher class of community ambulation (inferred through improved gait speed). The supposition that gait speed alone determines community ambulation status is misleading. Community ambulation is a challenging locomotor activity that requires the ability to walk, perform concurrent cognitive and motor tasks, maintain a trajectory and negotiate unpredictable terrain. The theoretical framework of community ambulation proposed by Patla and Shumway-Cook4 provides a basis for task analysis and consideration of requisite skills, and a platform for further research into advanced mobility, community ambulation, and social participation after stroke. We should proceed with caution when interpreting walking speed after stroke until further development of validated outcome measures for community ambulation has taken place.

Disclosures

None.

Susan Lord, PhD
Department of Medicine (Rehabilitation)
University of Otago
Wellington, New Zealand

Lynn Rochester, PhD
HealthQWest
Buchanan House
Glasgow Caledonian University
Glasgow, Scotland


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Susan Lord and Lynn Rochester

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