

## Scientific/Clinical Workshop

### Workshop Title

How to Measure Quality of Movement in Stroke Recovery: Showing the Scene of the SRRR Consensus Meetings

### Workshop Responsible

Gert Kwakkel (Chair Neurorehabilitation)

### Speakers

Jane Burridge, Erwin van Wegen

### Abstract

The workshop will address the need for, and discuss the design of, longitudinal kinematic and/or kinetic studies aimed at discriminating behavioral recovery by restitution from compensation during a standardized functional task. This work builds on the first, second and third Stroke Recovery and Rehabilitation Roundtable (SRRR) meetings that brought together an international group of preclinical and clinical researchers along with statisticians, methodologists, funders and consumers. The Group worked together to accelerate the development of effective treatments for stroke recovery and to promote/encourage the uptake of best-evidence in stroke rehabilitation. The first meeting held in Philadelphia (2016) was focused on four areas of recommendation: translation of preclinical evidence into human discovery trials; recovery biomarkers to provide knowledge of therapeutic targets and prognosis in human stroke; development, monitoring, and reporting standards for interventions; and standardized measurement in motor recovery trials. The second meeting was held in Montreal (SRRR2, 2018), where the SRRR worked on new priority areas:

- (1) cognitive impairment
- (2) standardizing metrics for measuring quality of movement (QoM) of the upper paretic limb
- (3) improving development of recovery trials
- (4) moving evidence-based treatments into practice.

The third meeting (SRRR3 proposed in 2022) will focus, amongst others, on standardizing metrics for measuring QoM for the lower limb to quantify and understand recovery of standing balance and hemiplegic gait early post stroke. Our premise is that disambiguation of behavioral restitution from compensation is important to better understand recovery of both upper and lower limb motor control post-stroke and subsequently design better interventions.