

The use of reach kinematics to distinguish between recovery phenotypes after stroke

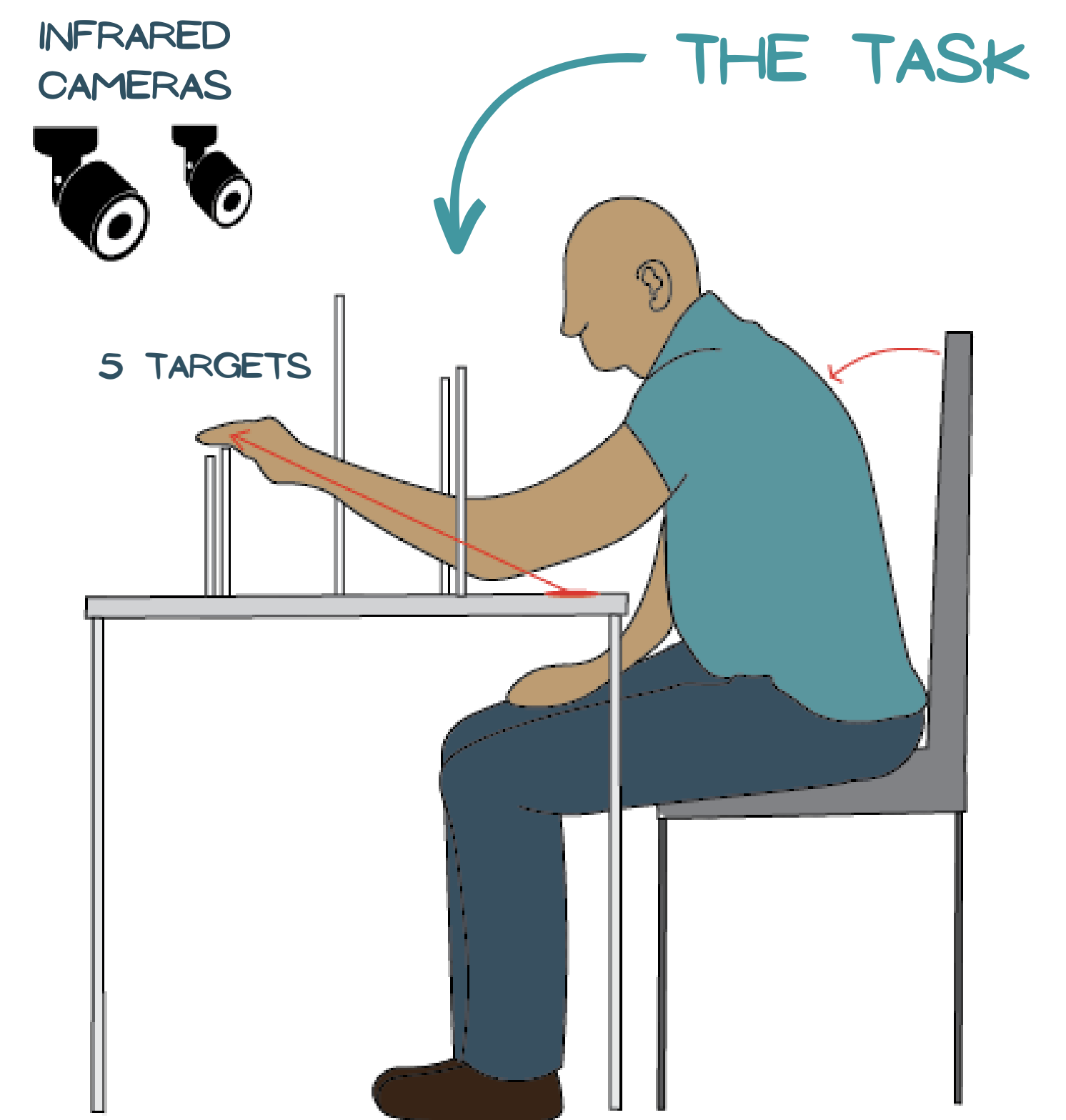


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Stroke is a leading cause of disability, and often results in weakened motor control. Reliable outcome predictions are vital for patients and their families.

Current tools are 75% accurate in predicting three-month functional outcomes within a week of stroke. Yet, among patients with good or excellent predictions, two phenotypes emerge: those who reach the outcome in time, and those who do not.

Kinematic analysis provides insights into movement quality. Jerky motions and trunk shifts may indicate early compensatory strategies due to post-stroke motor limits. Kinematics may help us dissociate between the two recovery phenotypes.



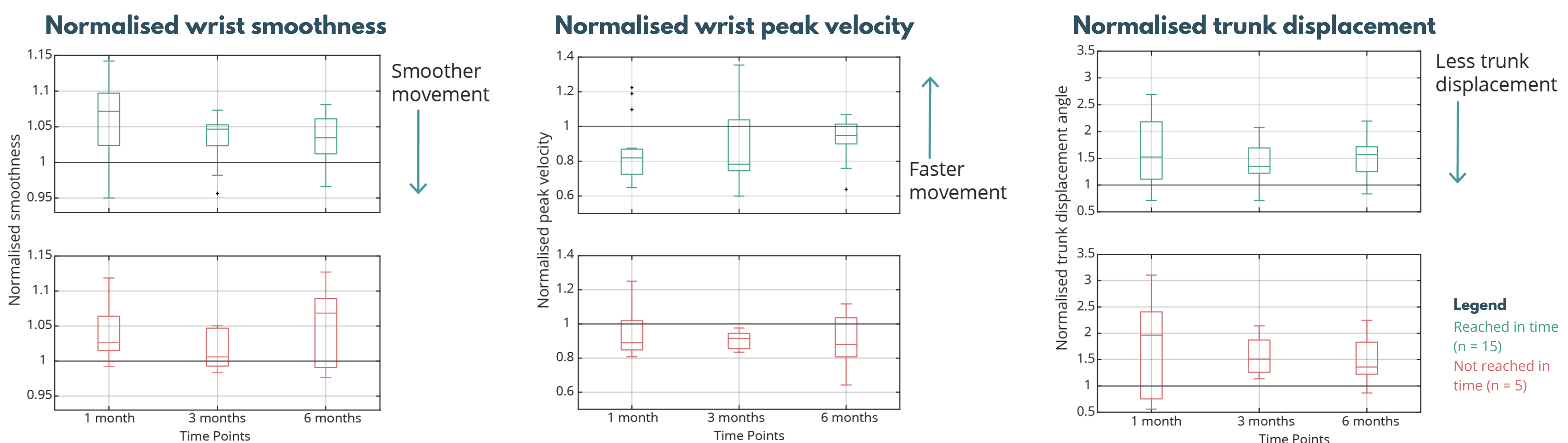
What was the goal of this study

- 1) Longitudinally record paretic upper limb kinematic measures.
- 2) Evaluate hand-reaching smoothness & trunk displacement's ability to differentiate recovery phenotypes of acute stroke patients.

What we did



What we found



Hand-reaching smoothness tended to improve over time and was associated with faster movements. Trunk displacement seems to be decreasing over time.

Logistic regression analyses will be used to evaluate the potential of reaching kinematics to differentiate between recovery phenotypes.