

Title: Do people with pre-existing cognitive impairments receive less stroke rehabilitation?

Introduction: Pre-existing cognitive impairment is associated with poorer outcome after stroke but it is unknown whether this is linked to rehabilitation received. This study examined whether stroke survivors with pre-existing cognitive impairment receive fewer rehabilitation processes than those without.

Methods: A prospective observational cohort design, measuring number and type of inpatient physiotherapy (PT) and occupational therapy (OT) sessions received during the first eight weeks post-stroke and processes such as referral to Early Supported Discharge (ESD) and length of hospital stay. 139 participants were categorised with or without pre-existing cognitive impairment based on documentation in clinical notes at four UK inpatient stroke rehabilitation units.

Results: 33 participants were recruited with pre-existing cognitive impairments; 106 without. Participants with pre-existing cognitive impairments received 16 fewer total combined PT and OT sessions (95% CI 2.89, 29.16); nine fewer single discipline PT sessions; and were less likely to be referred to ESD. They did not receive fewer single discipline OT or other therapy sessions; did receive two more non-patient facing OT sessions (95% CI 0.6, 4.3); and were not discharged earlier from inpatient rehabilitation. The pre-existing group had less severe stroke (mean difference NIHSS 1.8, 95% CI 0.9, 2.8), higher pre-stroke disability (mean difference mRS 0.5, 95% CI 0.6, 10.3) and adjusting for potential confounders reduced average fewer combined PT and OT sessions to nine (95% CI -4.5, 24.2).

Conclusion: People with pre-existing cognitive impairments have less rehabilitation than those without, particularly physiotherapy and referral to community therapies; and more non-patient facing OT.

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