

# Do people with pre-existing cognitive impairments receive less stroke rehabilitation?: an observational cohort study

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# Background

- 1/10 have diagnosis of dementia prior to first stroke
- Pre-existing dementia/cognitive impairment associated with poorer outcome
- Rehabilitation recommended for ALL patients
- Barriers to stroke rehab - time and priority clinicians give patients
- Some patients may have pre-clinical symptoms of dementia



# Aim

- To examine whether there was a difference in amount of stroke-specific rehabilitation received by people with and without pre-existing cognitive impairment/dementia.



- Setting: Four inpatient stroke rehabilitation units.
- Participants: Consecutive sample of stroke patients: capable of giving informed consent/person available to act as a personal consultee.
- Data: Collected from clinical notes over 8 weeks
- Measures:
  - Number of inpatient physiotherapy (PT) and occupational therapy (OT) sessions offered during the first 8 weeks post-stroke
  - Referral to Early Supported Discharge (ESD)
  - Length of hospital stay (censored at eight weeks)
  - Discharge destination

# Groups

Documented dementia  
diagnosis on  
admission  
n = 9 (7%)

e.g. OT documented a  
patient had pre-existing  
memory problems based  
on history from relative  
n = 24 (17%)

No documentation re:  
pre-stroke cognitive  
problems  
n = 106 (76%)

Pre-stroke cognitive  
impairment group  
n = 33

No pre-stroke cognitive  
impairment group  
n = 106

Total 150 patients consented, data collected for 139

Number of therapy sessions received			
Type of therapy	No pre-stroke cognitive impairment (n=106) Mean (SD), median	Pre-stroke cognitive impairment (n=33) Mean (SD), median	Difference in means (95% confidence interval)
Total PT and OT combined	55.84 (35.3), 50	39.81 (25.5), 37	16.03 (2.89, 29.16) Unadjusted  14.1 (0.4, 27.8) Adjusted*
Physio			
Patient facing	24.3 (16.2), 21.5	14.6 (10), 16	9.68 (3.7, 15)
Non-patient facing	3.59 (3.3), 3	4.03 (4.4), 2	-0.4 (-1.8, 0.9)
Total PT	27.91 (18.5), 24.5	18.66 (12.3), 18	9.24 (3.67, 14.82)
OT			
Patient facing	22.8 (15.3), 20	13.6 (10.7), 10	9.21 (3.5, 14.9)
Non-patient facing	5.08 (4.3), 4	7.51 (5.8), 5	-2.4 (-4.3, -0.6)
Total OT	27.93 (18), 26.5	21.15 (14.9), 19	6.78 (-0.74, 13.63)

Participants with pre-stroke cognitive impairment/dementia:

- **No difference** in amount of single discipline OT, psychology or SLT
- **Not** discharged earlier from inpatient rehabilitation
- Were **less likely** to be referred to ESD ( $p < 0.008$ )
- **No difference** in new admissions to residential care

- Sizeable group of stroke rehab patients (24%) with pre-existing cognitive impairment **may not receive equitable care.**
- Patients were **already in rehab** – many are excluded
- Is difference in rehabilitation **a bad thing**? Or is it appropriate?



# Discussion

- 42% of participants recruited using **consultee process** – often excluded group
- **17%** within stroke rehab with undiagnosed pre-stroke cognitive impairments - first study to describe them. Would formal assessment identify different numbers?
- Lack of data on **outcome** – area for future research



# Summary

- People with pre-existing cognitive impairments appear to receive different rehabilitation processes than those without
- Particularly physio and referral to ESD
- Demonstrated it is possible to recruit people with pre-existing dementia to stroke research – often excluded



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