



# Post stroke communication disability: a risk factor for falls in inpatient rehabilitation

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## Background

Falls in hospital can potentially result in serious adverse events and are one of the most common complications during stroke recovery<sup>1</sup>. Communication disability has been associated with higher risk of falls in the neurological population<sup>2</sup>. Despite this, communication disability following stroke has rarely been studied as an independent risk factor.

## Aim

To determine if there is an association between the incidence of falls and communication disability amongst patients in inpatient rehabilitation following stroke.

## Method

Retrospective audit of consecutively admitted patients with confirmed stroke on CT or MRI. The sample was divided into 2 groups based on the presence or absence of functional communication (defined as the ability to meet basic needs for the ward environment) as determined by Speech Pathology assessment. The number of fallers and rate of falls for the 2 groups was compared.

## Contact Details

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## References

1. Stroke Foundation. National Stroke Audit – Rehabilitation Services Report (2016). Melbourne, Australia. 2. Bergman, K., Papendick, L. (2014). Falls in the Neurologic Illness Population. *Journal of Trauma Nursing*, 21(4), 182-185

## Results

The sample consisted of 147 patients. 32 patients did not have functional communication (Table 1). The falls rate across the sample was 27%. Of the 32 patients without functional communication, 14 (44%) fell during their rehabilitation admission, compared to 29% of those with functional communication (Table 2). The relative risk of falling was calculated at 1.94, meaning patients without functional communication are nearly twice as likely to have at least 1 fall. The incidence of falls in patients without functional communication is 46 falls per 100 bed days. This is compared to 8.5 falls per 100 bed days in patients with functional communication (Table 2).

**Table 1: Characteristics of sample**

	Functional Communication (n = 117)	No Functional Communication (n = 32)
Demographics		
Age	75.41	76.25
Length of stay	32.28	31.66
Male %	67	18
Type of stroke		
Left hemisphere	39	24
Right hemisphere	59	6
Other	17	2

**Table 2: Comparison of falls in patients with functional communication and non functional communication**

