



# Addition of the Post Stroke Checklist to Standard Outcome Measures Provides Unique Information Relevant to Stroke Recovery

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## Introduction

The Post Stroke Checklist (PSC) is an easily administered, recently developed clinical tool to identify unmet needs in stroke patients. The relative value of the PSC compared to other outcome measures has yet to be determined.

## Methods

We evaluated 162 ischemic stroke patients (median age 68, range 31-97) 30 days following discharge in the outpatient clinic of our Comprehensive Stroke Center. Items were originally scored by a nurse and reviewed with a stroke physician. The PSC was administered to all patients as well as the Barthel Index (BI) and modified Rankin Scale (mRS). We stratified each scale according to severity and identified actionable PSC items in each severity group. Using Fisher's Exact Test we searched for correlation between the total number of PSC items scored positively and the total score of other outcome measures. We also looked for correlations between individual PSC items and other outcome scores.

## Results

The median (range) BI was 100 (10-100) and mRS was 1 (0-4). We stratified each outcome measure into 2 groups: BI-S (more severe) 0-89 (n=23) and BI-L (less severe) 90-100 (n=103); mRS-S (more severe) 3-5 (n=23) and mRS-L (less severe) 0-2 (n=103). 94 patients responded positively to one or more items in the PSC. There was no difference in total positive scores for any of the stratified groups, mRS (p=0.96) and BI (p=0.19). The frequency of positive responses for individual patients ranged from 1 to 6. The most common items identified are listed in the table below. No significant differences were noted.

Gender		Age	BMI
Female: 47%	Range	31-97	19.7 – 51.38
	Mean	70	30.3
Male: 53%	Median	68	30.1

## Discussion

Follow-up is accomplished in our stroke clinic (90% of follow-up data), or by phone for those who do not come to the clinic. Despite the relatively low severity scores and high functional scores, there are still needs that have not been identified with these scoring tools. Action was taken in 46 (48%) of cases with actionable items identified. Action taken specific to identified needs was easily tracked with the PSC tool, facilitating performance improvement opportunities:

- Depression: 18/30 (60%)
- Cognitive Dysfunction: 2/33 (6%)
- Pain: 7/19 (37%)
- Hobbies & Relationships: 13/18 (72%)

Actions taken: referrals to psychiatry, neuropsychology, physiatry, pain management, & stroke support groups.

## Conclusions

The PSC is simple to administer and was well accepted by clinicians and patients. Depression/Anxiety, Cognitive Dysfunction, Instrumental ADL's, and New Onset Pain are not included in the BI and mRS but are easily identified using the PSC. Our results suggest that the PSC provides important information about these unmet needs in stroke patients independent of stroke severity.

## Reference

Philp I, et al. Development of a poststroke checklist to standardize follow-up care for stroke survivors. J Stroke Cerebrovasc Dis. 2012 Dec 19. pii: S1052-3057(12)00360-6. doi: 10.1016/j.jstrokecerebrovasdis.2012.10.016.

PSC Item	BI-S	BI-L	p value	mRS-S	mRS-L	p value
Depression/Anxiety	9	21	0.07	7	23	0.62
Cognitive Dysfunction	9	24	0.12	7	25	0.80
New Onset Pain	3	16	1.0	4	15	1.0
Hobbies/Relationships	5	13	0.33	3	15	1.0

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