

Predicting Successful Community Discharge from an Acute Inpatient Rehabilitation Facility (IRF) after Stroke

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Introduction

Stroke affects approximately 800,000 people a year, with many requiring Inpatient Rehab Facility (IRF) stay for post-acute care and intensive rehabilitation. This study adds to the ongoing effort in IRF's continuing quality assessments to ensure that the IRF discharge outcomes are in line with what is expected outcomes for patients with stroke.

Methods

This retrospective chart review assessed successful community discharge status of 27 patients from an IRF post-stroke unit from April to June 2019.

Demographic and clinical factors, including stroke severity, characteristics, and treatments were collected and analyzed. Successful community discharge was defined as reentry into the community and not other post-acute care settings such as skilled nursing facilities (SNF) or long-term acute care (LTAC) hospitals and no readmission to the acute care hospital (within 30 days). Descriptive statistics and associations are presented.

Key Results

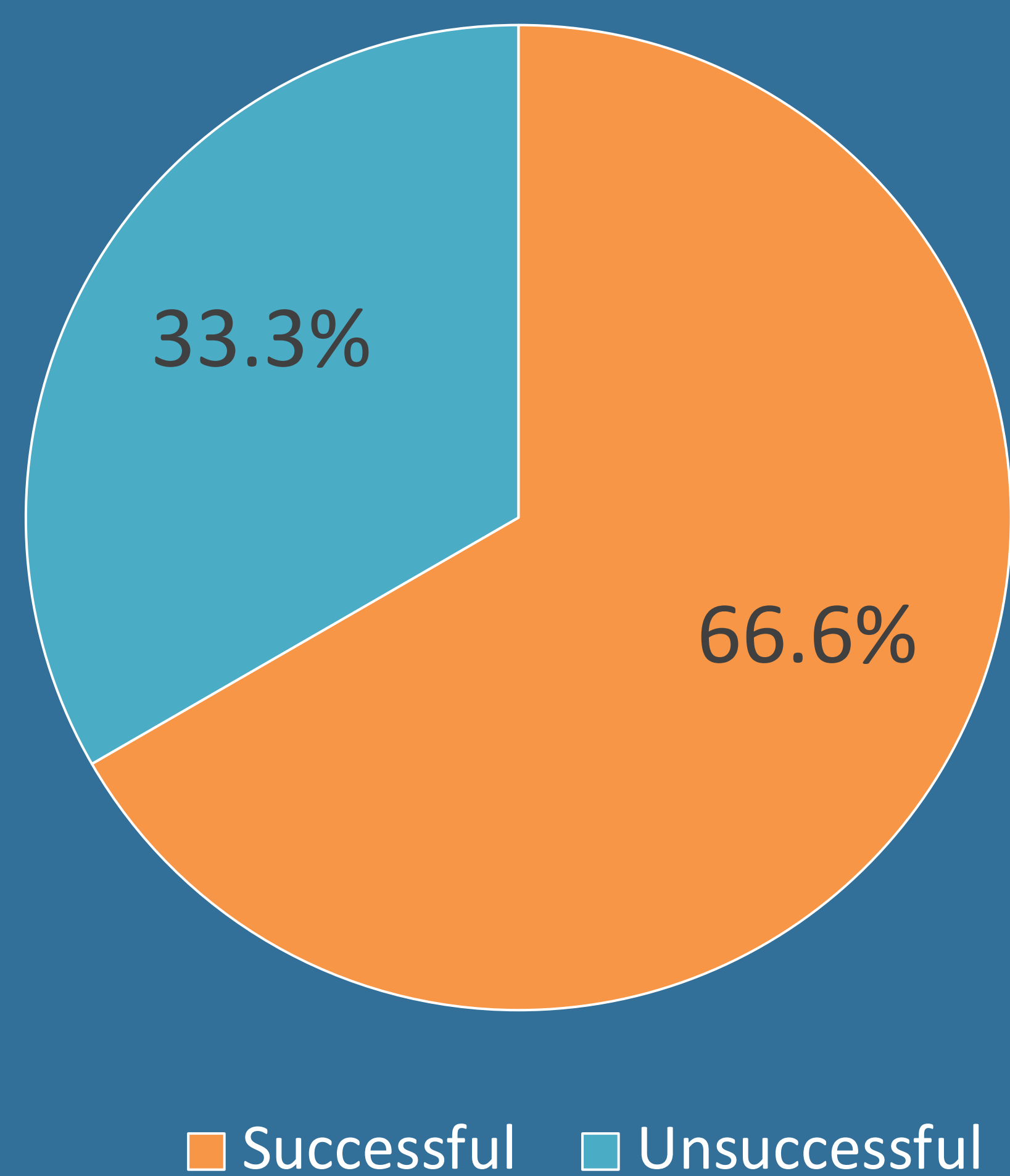
- Higher Mobility GG score at admission and discharge ($P=0.007$ and $P=0.048$, respectively), and higher Self-Care GG score upon discharge ($P=0.025$) were significantly associated with a successful community discharge.
- Sensory loss ($P=0.026$) was associated with unsuccessful community discharge

Discussion

This study suggests that certain clinical factors can help predict successful community discharge. GG scores provide information comparable to FIM data, as higher scores did correlate with favorable discharge outcome. There is a need for larger studies to identify other factors and further validate these associations. However, this information may inform future quality improvement interventions aimed at increasing the likelihood of successful community discharge from the IRF for post-stroke patients.

Clinical indicators scoring **Mobility, Self-Care, and Sensory Loss** are associated with successful community discharge for stroke patients admitted to an Inpatient Rehab Facility

Community Discharge Status



Interventions and Post Care Outcomes (n=27)

	Successful	Unsuccessful	p*
	Frequency (%)	Frequency (%)	
TPA	2 (11.1%)	0 (0%)	0.539
Thrombectomy	3 (16.7%)	1 (11.1%)	1
Antihypertensive	13 (72.8%)	7 (77.8%)	1
Antiplatelet	15 (83.3%)	7 (77.8%)	1
Anticoagulant	10 (55.6%)	4 (44.4%)	0.695
Statin	16 (88.9%)	8 (88.9%)	1
	Mean (sd)	Mean (sd)	p**/***
Acute Care length-of-stay	9.2 (8.4)	9.9 (6.2)	0.275
Rehab (IRF) length-of-stay	16.8 (7.9)	22.6 (6.5)	0.070
Mobility GG Score at Discharge	15.8 (18.5)	9.2 (18.5)	0.048**
Mobility Change	18.5 (27.9)	8.8 (9.0)	0.324
Self-Care GG Score at Discharge	16.1 (18.5)	8.6 (18.5)	0.025**
Self-Care Change	11.8 (15.0)	6.4 (6.4)	0.324

Table 3: Interventions and Post-Care Outcomes * Chi Square test ** Mann-Whitney U test *** Independent Sample t-test

Demographic and Baseline Characteristics (n=27)

	Successful	Unsuccessful	p*
	Frequency, N (%)	Frequency, N (%)	
Total	18 (66.7%)	9 (33.3%)	
Gender			1
Male	13 (72.2%)	6 (66.7%)	
Female	5 (27.8%)	3 (33.3%)	
Ethnicity			0.700
African American	3 (16.7%)	2 (2.2%)	
Asian	0 (0%)	1 (1.1%)	
Latino	1 (5.6%)	0 (0%)	
White	14 (77.8%)	6 (66.7%)	
Married	7 (38.9%)	3 (3.3%)	1
Living Alone	6 (33.3%)	2 (2.2%)	1
	Mean (sd)	Mean (sd)	p**
Age	59.78 (14.5)	68.11 (12.5)	0.176

Table 1: Demographic and Baseline Characteristics *Chi Square test **Mann-Whitney U test

Clinical and Stroke Characteristics (n=27)

	Successful	Unsuccessful	p*
	Frequency (%)	Frequency (%)	
Stroke Type			1
Hemorrhagic	5 (27.8%)	3 (33.3%)	
Ischemic	13 (72.2%)	6 (66.7%)	
Previous Aid Service	1 (5.6%)	0 (0%)	1
Vision Impairment	6 (35.3%)	3 (33.3%)	1
Hemiparesis	11 (61.1%)	8 (88.9%)	0.201
Ataxia	3 (20.0%)	0 (0%)	0.523
Sensory Loss	4 (22.22%)	6 (75.0%)	0.026*
Aphasia	4 (23.5%)	4 (44.4%)	0.382
Apraxia	8 (44.4%)	4 (44.4%)	1
Dysphasia	9 (50.0%)	6 (66.7%)	0.683
Neglect	3 (16.7%)	4 (44.4%)	0.175
Spasticity	3 (16.7%)	3 (33.3%)	0.367
	Mean (sd)	Mean (sd)	p**
NIHSS	12.69 (17.6)	13.56 (17.6)	0.8
Mobility GG Score at Admission	16.74 (18.5)	7.39 (18.5)	0.007**
Self-Care GG Score Admission	15.21 (18.5)	10.28 (18.5)	0.136
BIMS Admission	12.63 (15.3)	10.81 (15.3)	0.561

Table 2: Preclinical and Stroke Characteristics *Chi Square test **Mann-Whitney U test

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This study was reviewed and deemed to be exempt by the Upstate Medical University IRB 1634358-1