Introduction and Disclaimer

These mock examination questions span diverse disciplines and are designed for your practice in preparation for the International Research Olympiad (IRO) 2024. Endeavor to answer them to the best of your ability, utilizing this opportunity to enhance your skills and knowledge. For additional practice, it is advisable to engage in extensive reading of various papers; such efforts will contribute to a more comprehensive and nuanced understanding of the subject matter.

Try your best, and good luck! –International Research Olympiad 2024

The Stroke Rehabilitation Assessment of Movement (STREAM)

Abstract

The Stroke Rehabilitation Assessment of Movement (STREAM) is a relatively new measure of voluntary movement and basic mobility. The main objectives of this study were: (1) to examine the relationship of the STREAM to other measures of impairment and disability and (2) to compare its usefulness for evaluating effects of stroke and rehabilitation and for assessing change over time with that of other measures of impairment and disability. The performance of 63 patients with acute stroke on the STREAM and other measures of impairment and disability was evaluated during the first week after stroke and 4 weeks and 3 months later. Scores on the STREAM were associated with scores on the Box and Block test, Balance Scale, Barthel Index, gait speed, and the Timed "Up & Go" Test (with Pearson correlation coefficients ranging from .57 to .80) and were associated with categories of the Barthel Index and Balance Scale. The STREAM's ability to predict discharge destination from the acute care hospital, as well as to predict gait speed and Barthel Index scores at 3 months poststroke, was comparable to that of other commonly used measures. Standardized response mean estimates provided supporting evidence for the ability of the STREAM to reflect change over time. The results obtained with the STREAM, as compared with other measures of impairment and disability in people with stroke, suggest that it may be useful in clinical practice and research.

Introduction

The evaluation of motor recovery is a cornerstone of the assessment of people with stroke. Most measurement instruments have emerged from theoretical frameworks developed to fit patterns of motor recovery observed in selected samples of people recovering from strokes. Some measures were based on theories that have been questioned, such as the assumption that recovery occurs in a predictable stereotyped pattern performed within flexor and extensor synergies. The theoretical basis of existing measures may explain why, according to a 1992 Canadian survey, published instruments for motor evaluation following stroke were used routinely in less than 5% of physical therapy departments. Other reasons for nonuse, we believe, may be related to practicality, including the time to administer the test, the dependence on equipment, and the complexity of the scoring scheme. Given what we viewed as the limitations of many measures of motor recovery, researchers and clinicians developed what they believe is a more "user-friendly" instrument called the Stroke Rehabilitation Assessment of Movement (STREAM). The content and format of the instrument were created in an effort to minimize barriers to routine clinical use. The STREAM was developed as an outcome measure that could be used to monitor the re-emergence of voluntary movement and basic mobility. Items in the original STREAM were based on clinical experience of physical therapists working in stroke rehabilitation and existing instruments.

The current version of the STREAM contains 30 items divided among 3 subscales: 10 items for voluntary motor ability of the upper extremity (UE), 10 items for voluntary motor ability of the lower extremity (LE), and 10 items for basic mobility. Examples of items on the STREAM include protraction of the scapula in a supine position, flexion of the hip and the knee in a supine position, and rolling onto one side from a supine position. A 3-point ordinal scale is used for scoring voluntary movement of the limbs, and a 4-point ordinal scale is used for basic mobility. The extra

category for basic mobility was added to allow for one of the score choices to be independence in the activity without the help of an aid (eg, walking aid, splints). The quality of movement for the UE and LE is also scored on a 3-point scale, but it is not reflected in the final score. A total score for each subscale is calculated, out of 20 points for the UE and LE subscales and 30 points for basic mobility. To allow for the possibility that occasionally an item cannot be scored, the subscales are converted to a percentage score out of 100 even though the scores are not interval based, and the total score is calculated as an average of scores obtained for the 3 subscales. The STREAM requires approximately 15 minutes to administer.

Generalizability coefficients, which indicate the extent to which a person can generalize results to any rater, subject, or occasion, for intrarater reliability ranged from .96 to .999 for the subscale and total scores, and generalizability coefficients for interrater reliability ranged from .98 to .995. The aim of our study was to assess how the STREAM compared with other measures of impairment and disability in people following a stroke. The objectives were:

1. To determine the degree of association between the STREAM and other measures of impairment and disability during the first 3 months poststroke.

2. To determine if the STREAM could be used to differentiate different levels of performance on measures of balance and independence of activities of daily living immediately following a stroke and at 5 weeks and 3 months poststroke.

3. To assess whether the STREAM scores obtained during the first week poststroke could be used to predict discharge destination and to compare this ability with that of the Barthel Index.

4. To assess whether the STREAM and other standard measures used to evaluate the effects of stroke and rehabilitation during the first week poststroke could be used to predict independence in activities of daily living and gait speed scores 3 months poststroke.

5. To examine the extent to which scores on the STREAM reflect change over time as compared with other measures used to evaluate the effects of stroke and rehabilitation.

Method

This investigation was part of a longitudinal cohort study designed to examine the recovery of UE and LE function following a stroke. Recovery from stroke is most rapid in the first few weeks following stroke, but continues up to 3 months following stroke. Because most people are expected to show improvements during the acute period after a stroke, we believe this is an important time period during which to assess the usefulness of the STREAM. A cohort of patients with residual physical deficits following an acute stroke was followed over a 3-month period. Patients were evaluated during the first week poststroke and 4 weeks and 3 months later.

In total, 357 consecutive patients were identified for the study. Of these, 189 patients met the inclusion criteria and were considered eligible for participation in the study, 78 patients were approached, and 67 patients consented to participate. Of the 67 consenting patients, sufficient data were obtained for 63 subjects. Table 1 summarizes the clinical and demographic characteristics of the final participants and nonparticipants for this study.

Table 1.
Demographic and Clinical Characteristics of Study Participants and Eligible Nonparticipants[a]

Characteristic	Participants (n=63)	Nonparticipants (n=122)	*P*
Age (y)			
$\bar{X}$	67	70	.561
SD	14	13	
Range	25–95	34–100	
Sex, n (%)			
Male	39 (62)	67 (55)	.363
Female	24 (38)	55 (45)	
Side of lesion, n (%)[b]			
Right	31 (49)	46 (38)	.623
Left	30 (48)	38 (31)	
Bilateral	2 (3)	1 (0)	
Missing	0	37 (30)	
Type of stroke, n (%)			
Ischemic	59 (94)	66 (54)	.046
Hemorrhagic	4 (6)	14 (11)	
Missing	0	42 (34)	
Stroke severity, n (%)			
Mild	12 (19)	44 (36)	.007
Moderate	33 (52)	38 (31)	
Severe	18 (29)	18 (15)	
Missing	0	22 (18)	

[a] Student *t* test used for comparison of age; chi-square test used for all other comparisons.

[b] Percentages may not add up to 100 because of rounding.

Once consent was obtained, information related to the occurrence of the stroke, the patient's medical history, and sociodemographics was recorded directly from the medical records. Subjects were classified according to stroke severity using the Canadian Neurological Scale (CNS). In addition to the STREAM, the following instruments were administered at each evaluation:

1. The CNS measures neurological status in patients with stroke and is divided into 2 sections: mentation, and motor function.

2. The Barthel Index is a self-proxy questionnaire that is designed to measure 3 categories of function: self-care, continence of bowel and bladder, and mobility.

3. The Balance Scale is a measure that consists of 14 task-oriented items.
4. Gait speed was timed over a 5-m distance. A study which compared comfortable and maximum gait speeds for 5- and 10-m distances, indicated that a 5-m comfortable walking speed was the most sensitive to change. Therefore, the 5-m walking distance at a comfortable pace was chosen for our study.
5. The TUG is considered to be a test of functional mobility. The patient is seated in a chair with armrests, and the time taken to stand up, walk forward 3 m, and return to the seated position is measured. Values for elderly individuals ranged from 7 to 10 seconds.
6. The Box and Block Test is used to measure unilateral gross manual dexterity. This test involves the patient moving as many blocks as possible, one by one, from one compartment of a box to another compartment of equal size within 60 seconds.

To determine the degree of association between the STREAM and other measures of impairment and disability, Pearson correlation coefficients were used in our study. Scores of the subscales and the total STREAM were correlated with scores from the Box and Block Test, the Balance Scale, gait speed, the TUG, and the Barthel Index.Correlations between 0 and .25 were considered low, those between .25 and .5 were considered fair, those between .5 and .75 were considered moderate, and those greater than .75 were considered strong. We expected a moderate correlation between the STREAM and other measures of impairment and disability. All correlations were examined crosssectionally on data obtained at entry to the study, 4 weeks later, and 3 months poststroke.

We also wanted to assess the ability of the STREAM to be used to differentiate among groups of individuals with stroke on the basis of performance on measures of balance and independence in activities of daily living immediately after stroke and 5 weeks and 3 months after stroke. For this analysis, subjects were grouped according to scores on the Barthel Index and the Balance Scale. 3 classification groups were formed (good, fair, and poor) for each measure based on cutoff points from the literature. As these groups are based on clinical criteria, the ability of mean scores on the STREAM to differentiate among these groups may reflect the clinical usefulness of the STREAM. An analysis of variance was used to test whether the mean STREAM scores differed across the 3 groups.

To assess the ability of the STREAM to be used to predict discharge destination from the acute care hospital, the probability of being discharged home was examined. Some authors have identified functional ability, as measured with the Barthel Index, as an important predictor of discharge destination, and we therefore compared the predictive ability of the Barthel Index with that of the STREAM. For these analyses, each possible value of the initial STREAM and Barthel Index scores, from 0 to 100, was used as a cutoff point, and the probability of discharge home was calculated for individuals with values at or below the cutoff point. The probability of discharge home was then plotted against consecutive cutoff points on the STREAM and the Barthel Index.

To test the ability of initial poststroke STREAM scores to predict Barthel Index scores and gait speed 3 months poststroke, multiple linear regression was used. The predictive ability of the STREAM was compared with that of all other measures of impairment and disability in this study.

In all models, potential confounding variables such as age, sex, type and side of lesion, level of cognition, and perceptual neglect were included. Because of the large number of potential confounding variables, this group of variables was first modeled alone, and only the significant confounding variables were retained in the final regression model.

Results

The first evaluation was performed an average of 8 days poststroke (SD=3, range=3–14). There was a mean of 29 days (SD=5, range=19–50) between the first and second evaluations and a mean of 85 days (SD=17, range=37–124) between the second and last evaluations. The mean and median scores for all measures are presented in Table 2. This table shows that mean scores improved over time.

The correlations between the total score of the STREAM and the scores for other measures of impairment and disability ranged from r=.36 to r=.80 for the 3 evaluations (Tab. 3). The total and subscale STREAM scores for the 3 evaluations also were correlated with severity of the stroke as measured by the CNS, with correlations ranging from r=.66 to r=.77.

We examined our ability to use the STREAM to predict discharge home from the acute care hospital (Fig. 1).

For this analysis, the probability of being discharged home versus being discharged to a rehabilitation center was plotted against cutoff values for the STREAM. Below a score of 63, the probability of being discharged home was zero. As the STREAM score increased beyond 63, the probability of discharge home increased in almost a linear fashion. For example, 20% of the participants who had a score of 80 or less on the STREAM at the time of the initial evaluation were discharged home after the acute care hospital. As shown in Figure 1, the ability of the STREAM to predict discharge home was similar to that for the Barthel Index.

The ability of the STREAM and all other measures during the first week poststroke to predict gait speed and Barthel Index scores after 3 months was assessed (Tab. 5). The only confounding variables were age and cognition and these variables were included in each of the regression models. The parameter estimates were significant, and the STREAM, during the first week poststroke, was able to be used to predict gait speed and Barthel Index scores after 3 months. The standardized parameter estimates indicated that a 1–standard deviation change on the STREAM resulted in an 8-point increase on the Barthel Index and a 0.22-m/s increase in gait speed at 3 months. The Balance Scale was the strongest predictor of gait speed at 3 months poststroke, followed by initial gait speed measurements, the STREAM, and the Barthel Index. Initial Barthel Index performance was the strongest predictor of Barthel Index scores at 3 months poststroke, followed by the TUG, the STREAM, and the Balance Scale. At the time of the initial evaluation, the STREAM could be used to explain a large proportion of the variability in gait speed, and the Barthel Index at 3 months, second only to the Balance Scale and the TUG, respectively.

Over the entire 3 months of the study, the 3 measures most able to reflect change were gait speed (1.15), the total score on the STREAM (0.96), and the Balance Scale (0.94). The measure least able to reflect change was the Box and Block Test for the affected UE (0.24). Over the first 5 weeks, the measures that reflected the largest amount of change were the Box and Block Test for the affected UE (1.3), followed by gait speed (1.05) and the Balance Scale (1.0), and then the and Box and Block Test scores, which are measured on true continuous scales, showed the greatest amount of change compared with the other measures.

Table 2.
Performance of Study Subjects (n=63) on Measures of Impairment and Disability at 3 Points in Time Poststroke[a]

	Initial Evaluation				5-Week Evaluation				3-Month Evaluation			
Measure	**$\bar{X}$**	**SD**	**Median**	**Range**	**$\bar{X}$**	**SD**	**Median**	**Range**	**$\bar{X}$**	**SD**	**Median**	**Range**
STREAM												
Total	75	26.7	86	7–100	86	19.1	94	18–100	89	18.0	97	21–100
UE subscale	73	33.3	90	0–100	85	26.2	100	0–100	88	24.0	100	0–100
LE subscale	75	28.9	85	0–100	86	22.3	95	0–100	90	19.0	100	15–100
Mobility subscale	74	25.9	83	10–100	88	16.4	97	39–100	91	15.0	97	33–100
Box and Block Test												
Affected UE	25	21.0	27	0–77	36	22.8	43	0–80	41	22.2	46	0–80
Unaffected UE	49	13.8	47	21–81	56	11.8	56	27–84	56	12.7	58	24–83
Barthel Index	72	27.9	85	5–100	86	20.4	100	30–100	92	14.0	100	40–100
Balance Scale												
Missing values imputed	34	21.2	39	0–56	44	15.9	52	0–56	48	10.0	52	22–56
Missing values removed (n=50)	37	18.1	41	0–56	47	11.5	52	9–56	49	8.3	52	22–56
TUG(s)												
Missing values imputed	73	87.1	21	7–106	34	49.2	13	7–83	21	25.9	11	7–72
Missing values removed (n46)	21	16.5	22	8–106	12	5.3	13	7–83	12	4.0	11	7–72
Gait speed (m/s)	0.55	0.38	0.58	0–1.33	0.82	0.43	0.90	0–1.60	0.85	0.36	0.93	0.13–1.45

[a] STREAM=Stroke Rehabilitation Assessment of Movement, UE=upper extremity, LE=lower extremity, TUG=Timed "Up & Go" Test.

Table 3.
Pearson Correlations for the Stroke Rehabilitation Assessment of Movement (STREAM) Total and Subscale Scores With Other Measures of Impairment and Disability at 3 Points in Time Poststroke (n=63)[a]

STREAM	**Evaluation**	**Box and Block Test (Affected UE)**	**Box and Block Test (Unaffected UE)**	**Barthel Index**	**Balance Scale**	**TUG Ability**	**Gait Speed**
Total	Initial	.73	.36	.78	.75	.80	.74
	5 weeks	.77	.37	.71	.68	.64	.62
	3 months	.78	.44	.75	.65	.57	.73
UE	Initial	.78	.31	.67	.57	.69	.56
	5 weeks	.79	.36	.66	.61	.49	.53
	3 months	.76	.31	.67	.53	.60	.64
LE	Initial	.53	.40	.71	.73	.75	.74
	5 weeks	.64	.29	.59	.55	.59	.55
	3 months	.70	.30	.63	.55	.51	.65
Mobility	Initial	.66	.55	.84	.88	.85	.83
	5 weeks	.69	.40	.75	.71	.57	.65
	3 months	.66	.40	.82	.78	.62	.76

[a] UE□upper extremity, LE□lower extremity, TUG□Timed "Up & GO" Test. All correlations significant at the P□.0001 level except for the unaffected UE during the Box and Block Test at all 3 evaluations (P □.025).

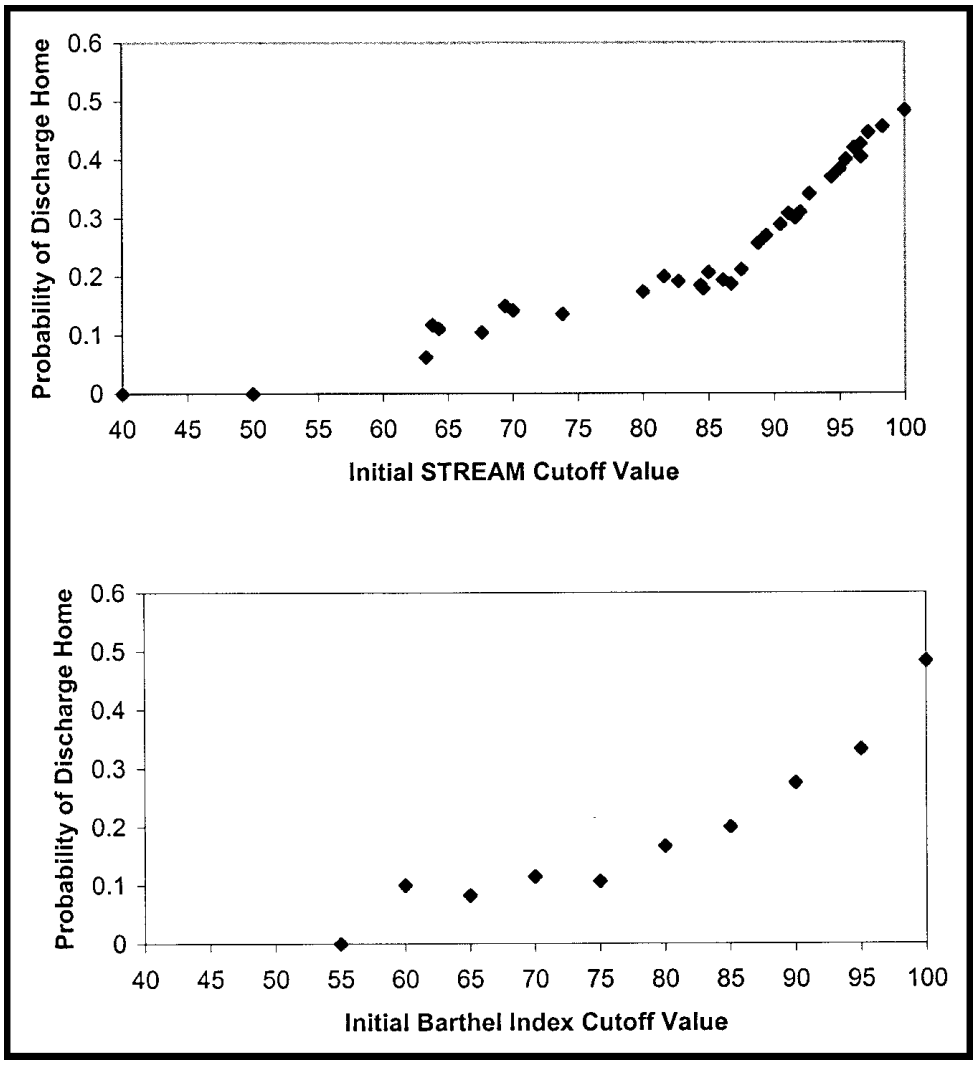

Figure 1
The probability of being discharged home after the acute care hospital given an initial score on the Stroke Rehabilitation Assessment of Movement (STREAM) or the Barthel Index ≤ cutoff value (n=63).

Discussion and Conclusions

Patients with motor and functional deficits following an acute stroke are expected to improve11,44 and thus, we believe, provide an ideal population in which to assess the performance of the STREAM relative to other measures used to evaluate effects of stroke and rehabilitation. The STREAM showed a moderate to high correlation with the other measures used in this study. This finding is expected because the ability to perform functional activities is dependent on a person's motor ability. The correlations between data obtained for the STREAM and its subscales and data obtained for the Box and Block Test, the Balance Scale, gait speed, the TUG, and the Barthel

Index were always less than .9, indicating that the STREAM may be related to these scales, but is reflecting a different component of recovery. In addition, mean STREAM scores could be used to distinguish between different levels of performance on the Barthel Index and the Balance Scale. The cutoff criteria for the Barthel Index were based on what we considered clinically relevant variables, including the probability of going home and hospital length of stay, and the cutoff criteria for the Balance Scale taken from the literature15,17 were based on ambulatory status. The ability of mean STREAM scores to be used to distinguish among the group classifications based on Balance Scale and Barthel Index scores reflects its potential relationship to these clinical variables.

The ability to predict discharge destination and functional ability in individuals with stroke admitted to an acute care hospital allows prompt discharge planning, which may minimize hospital length of stay. The STREAM showed a usefulness comparable to that of the Barthel Index for predicting discharge destination from an acute care hospital. Compared with the Box and Block Test, the STREAM during the initial evaluation was better able to predict gait speed and functional ability 3 months poststroke, but its prognostic ability for these outcomes was similar to that of the Balance Scale, gait speed, the TUG, and the Barthel Index.

The Barthel Index is considered by some authors to be a "gold standard" against which new instruments may be evaluated. In our study, the correlations between the STREAM scores and the Barthel Index scores for each evaluation ranged from .75 to .78.

A concern with any outcome measure is that a great proportion of individuals would be at the high end of the scale and further improvements would be difficult to assess. The STREAM, however, was among the 3 measures with the smallest ceiling effect for the first 2 evaluations but not the third evaluation. During the acute period after a stroke, when the impact of the disability may not yet be manifested, fewer individuals would be expected to reach the maximum score on the STREAM. However, by 6 weeks after a stroke, 80% of patients would have reached their highest level of motor recovery. In our study, after 3 months, less than 40% of individuals had reached the maximum score on the total STREAM, and less than 60% had reached the maximum score on the UE and LE subscales. The Barthel Index had the greatest ceiling effect at 3 months poststroke, with 60% of the subjects reaching the maximum score. By 3 months poststroke, the subjects may have used all compensatory techniques for accomplishing activities of daily living, and better function can only be achieved with further motor recovery. The ceiling effect of the Barthel Index has been previously documented as one of the limitations of this measure.

The results from our study have provided some indications as to when the STREAM may be preferred over other measures to monitor recovery from a stroke. In our study, 26% of the subjects were not able to perform the TUG, and 21% were not able to perform the Balance Scale at the time of the initial evaluation. When people are unable to complete measures that require high levels of functioning during this acute period, a measure of voluntary movement such as the STREAM could play an important role in monitoring recovery. In addition, for more severe strokes, variables measured by outcomes such as the Box and Block Test, the Balance Scale, gait speed, the TUG, and the Barthel Index may not represent the focus of immediate therapy and, therefore, may not be appropriate for monitoring changes in recovery during this acute period.53 During the time immediately after a stroke, the focus may be on restoring voluntary movement and basic mobility. These are assessed by the STREAM and we believe are necessary for further functional recovery. Moreover, for individuals who are unable to perform high-level functional tests, the STREAM can be used within the first few days poststroke to predict the probability of discharge home from an acute care hospital and functional potential 3 months poststroke. This is important as the length of

stay in an acute care hospital becomes shorter.

Another important aspect of selecting an outcome measure is its clinical utility. The STREAM is relatively simple to score as compared with other instruments of motor recovery, it requires little equipment, and it only takes 15 minutes to administer. The ease of use is comparable to that for the other measures examined in this study. However, because the calculation of the final score on the STREAM requires several steps, it may be difficult to arrive at the total score in the presence of the patient.

Our study provides information about the relationships of the STREAM to other commonly used measures of stroke impairment and disability, as well as the measurement properties of the STREAM. Information on the construct validity of the STREAM, we believe, was demonstrated by its correlations with the other measures of impairment and disability and its ability to differentiate levels of performance on measures of balance and independence in activities of daily living. The ability to use STREAM scores to predict important outcomes of stroke, including discharge home, functional independence, and gait speed, has resulted in information about its predictive validity. The longitudinal validity, which is the ability of an instrument to reflect change, of the STREAM was demonstrated by its capacity to monitor changes in recovery of voluntary movement and basic mobility during the first 3 months poststroke.

The question could be raised as to why there is a need for yet another measure of motor recovery. When the STREAM was developed, it filled a gap. According to a Canada-wide survey conducted in 1992, the complexity of existing measures of motor recovery was a barrier to their use. The underlying factor that appears to be driving use of these measures is the type of therapy being used and the need to evaluate patients' progress along these therapeutic lines. The STREAM is not strongly linked to any one theoretical framework of how recovery occurs but rather provides a sampling of items that its developers believe reflect the re-emergence of movement and basic mobility. The STREAM, because of its independence from a treatment philosophy, its demonstrated measurement properties, and its ease of use, provides therapists with an option that may emerge as a measure of choice for the evaluation of different treatment approaches.

There were differences between the study sample and the nonparticipants in terms of the type and severity of stroke. The results of this study cannot be generalized to patients who are not similar to the study sample. This includes patients with severe cognitive impairment and substantial comorbidities.

When testing the ability of the STREAM to predict discharge destination, the outcome was dichotomized as "home" versus "not home" because most patients either went home or to rehabilitation. Testing the STREAM in a sample of patients with stroke where discharge destination is more variable would provide more information

with regard to its ability to discriminate between patients on this important outcome. Another limitation of our study was that the first evaluation was done an average of 8 days poststroke. Motor recovery can take place during the first 10 days poststroke; therefore, some patients may have experienced recovery before the first evaluation. Not having evaluated this early recovery may have reduced the variability in scores for all measures used in this study and may have underestimated their ability to predict the level of independence in functional activities of daily living and gait speed.

Paper 3: Neuroscience, Stroke Rehabilitation

Question 1

What is the significance of a STREAM score of 63 in predicting discharge destinations for stroke patients?
(Select one)

a) It indicates the patient's ability to independently perform daily activities.

b) It marks the threshold below which the probability of being discharged home is zero.

c) It is the minimum score required for a patient to be considered for rehabilitation therapy.

d) It reflects the patient's cognitive recovery post-stroke.

Question 2

Which measures were STREAM scores significantly correlated with?
(Select all that apply)

a) The Box and Block Test

b) The Barthel Index

c) Gait speed

d) The Timed "Up & Go" Test

Question 3

Which three measures were found to be most able to detect change in patients?
(Select three)

a) STREAM

b) Gait speed

c) The Balance Scale

d) The Timed "Up & Go" Test

Question 4

What was the range of the interrater and intrarater reliability coefficients for STREAM?
(Select one)

a) 0.80 to 0.90

b) 0.96 to 0.999

c) 0.85 to 0.95

d) 0.70 to 0.85

Question 5

According to the study, how does a STREAM score relate to the probability of being discharged home?
(Select one)

a) It has no significant impact on discharge decisions.

b) Only scores above 80 ensure discharge home.

c) Below a certain score, the probability of home discharge is zero, but increases with higher scores.

d) A high STREAM score guarantees immediate discharge home.

Question 6

Which attributes of STREAM were demonstrated through the comprehensive evaluation?
(Select all that apply)

a) Its robustness as a measure of stroke recovery.

b) Its utility in predicting functional outcomes like gait speed and daily activities independence.

c) Its ability to predict cognitive recovery post-stroke.

d) Its sensitivity to changes over time, especially in patients with severe stroke.

Free Response Question 1

Explain the concept of responsiveness to change in stroke outcome measures, focusing on how the Stroke Rehabilitation Assessment of Movement (STREAM) demonstrates this property. Provide examples of how the STREAM captures meaningful improvements in stroke recovery over time.

Free Response Question 2

Explain how the dynamic nature of the STREAM's scores, particularly in individuals classified with severe problems post-stroke, shows its sensitivity to changes in motor recovery. Include the implications of the STREAM's ability to reflect significant changes over the study's duration for monitoring rehabilitation interventions.

Free Response Question 3

Discuss the impact of predictive validity in measures of daily-living activities post-stroke, such as the Barthel Index, on discharge planning and rehabilitation outcomes. How does predictive validity influence patient care pathways and resource allocation in stroke rehabilitation settings?

Free Response Question 4

Analyze the correlation between STREAM scores and the standard measures of disability such as the Box and Block Test, Balance Scale, and Barthel Index. According to the paper, how does this correlation validate the STREAM's clinical utility that it predicts functional outcomes in stroke survivors and monitors recovery progress?