

**This assessment review was compiled by our students and is intended to be used as a guide in assisting clinicians. We encourage you to review the evaluations and assessments for yourself to guarantee the most accurate and updated information.*

I. General Information

Title of the test: Stroke Rehabilitation Assessment of Movement (STREAM)

Author: N/A—unable to find any information on author, publisher, cost, or obtaining a manual online.

Publisher: N/A

Time required to administer: 15-30 minutes

Cost of the Test: N/A

II. Description of Test

Type/Purpose of Test: performance-based measure that assesses voluntary movement of extremities and mobility following a stroke. Specifically measures amplitude of movement (i.e. how much of movement they can do) and quality of movement (i.e. normal movement patterns or atypical movement patterns). Information can be used to predict discharge destination, functional potential 3 months post-stroke, and LOS.

Population: clients who have had a stroke

Focus of measurement:

Organic systems Abilities Participation/life habits Environmental Factors

III. Practical Administration

Ease of Administration:

Very easy to administer. Little equipment is needed, questions on assessment progress logically, and directions to give clients are easy to understand and brief. Scoring is fairly straightforward, although having definitions of scoring criteria would be helpful for first few times administering it.

Clarity of Directions:

Very clear and straightforward. However, there are no directions available for how to actually interpret the scores.

Scoring Procedures:

Scored on ordinal scale (0-2 on voluntary movement of limbs and 0-3 on basic mobility). Each item will receive a score. At end, subscale scores for Upper Extremity, Lower Extremity, and Basic Mobility sections are found first by adding scores of each section. Next, divide the total in each subscale section by the maximum score a person can get in each subscale section to get the Subscale Scores. To get the STREAM Total Score, multiply each subscale score by 100. Next add these together and divide the total by 3. All of this is easily explained on the score sheet.

- Voluntary Movement of Limbs Scoring:
 - 0: unable to perform movement through any observable range
 - Score zero if there is only a flicker or less than 10% of typical movement
 - 1a: can only do part of movement, with marked deviation from normal pattern (i.e. postural asymmetry, interfering tremor or dysmetria, overcompensating for movement with other muscles or momentum, etc.)
 - 1b: can only do part of movement, but comparable to the other side (i.e. resembles normal movement pattern)

- 1c: can complete movement (at least 90% of movement), but with marked deviation from normal movement pattern
- 2: completes movement (at least 90%) similar to that of unaffected side (i.e. typical normal movement pattern)
- X: activity not tested secondary to pain, ROM, etc
- Basic Mobility Scoring
 - 0: unable to perform movement through any observable range
 - 1a: able to participate in movement but needs partial assistance or stabilization to complete it and has marked deviation from normal movement pattern
 - 1b: able to assist in completing movement but needs assistance or stabilization and follows a normal movement pattern
 - 1c: completes activity independently with or without an aid (i.e. handrail, orthotic, wall, etc), but with marked deviation from normal movement pattern
 - 2: completes movement independently with normal movement pattern but requires an aid
 - 3: completes movement independently with normal movement pattern without an aid
 - X: activity not tested
- When scoring, any verbal encouragement, cueing and close supervision is still considered independent.

Examiner Qualification & Training:

No specific training is required. However, you should know what basic movement terms mean (i.e. protraction, abduction) and what a typical movement would look like. You should also know how to safely stabilize or provide assistance to someone during mobility activities.

IV. Technical Considerations

Standardization: Norm Referenced: _____ **Criterion Referenced:** X **Other:** _____

Reliability: Excellent Test-Retest and Internal Consistency

Validity: Excellent

Manual: _____ **Excellent** _____ **Adequate** _____ **X** **Poor**

~Only manual available are a few pages on how to score and instructions for the test, which was very helpful. However, nothing is available for how to interpret the scores, and couldn't find any more extensive manuals on the assessment online.

What is (are) the setting/s that you would anticipate using this assessment?

acute or inpatient rehab; maybe outpatient rehab, SNF, home health

Summary of strengths and weaknesses

Weaknesses:

- *Does not assess functional/occupational performance.* May have strength, ROM, or mobility in certain areas but this doesn't tell us how that translates to function from this assessment, especially when movement is combined with other factors, like cognition and perception, or adaptations to task/environment.
- Not very sensitive to change (i.e. score of 1b--partial completion of movement with typical movement patten--could encompass a wide range of movement abilities—anywhere from 10% to 90% of movement ability).
- No information available on how to interpret the scores, such as what scores typically relate to what kind of prognosis for recovery, daily function, etc.
- Does not take into account age or cognitive function when using scores to assess rehab potential.

Strengths:

- Little equipment is needed: you just need a pencil, score sheet, flat surface where they can go from supine to sitting with feet on ground (like a bed), pillow, a few stairs, and a short distance (only about 30 feet) to walk indoors.
- Includes what to say to client for each item, so you have a way to explain instructions in easy to understand manner.
- Includes “Notes” on most items that delineates particular behaviors and how they would be scored, so there is less confusion about how certain actions would be scored.
- Fast to administer.
- Scoring directions are very clear and spelled out on score sheet—you don’t need a manual to figure out how to total up various scores.
- Logical progression of assessment (i.e. all supine activities are grouped together and progress to all sitting activities to standing to walking)
- Takes into consideration aphasia or other problems affecting comprehension of instructions. Not only are there verbal instructions, but therapist can demonstrate and then have client demonstrate movement on unaffected side to test for understanding. In addition, client can try up to 3 times, in case they still do not understand.

Resources:

Salter, K., Jutai, J., Zettler, L., Moses, M., McClure, A., Mays, R., Foley, N., & Teasell, R. (2012). Ch. 21: Outcome measures in stroke rehabilitation. P. 46-48. In *Evidence-Based Review of Stroke Rehabilitation*. Retrieved from www.ebrsr.com/uploads/Chapter-21-outcome-assessment-SREBR-15_1.pdf

Class Resources: Handout of assessment, instructions, and scoring criteria