## Administration \& Scoring Guidelines

Please note, the Brisbane EBLT is for use by qualified health professionals only (speech pathologists or equivalent). A range of factors contribute to any clinical decision and test results should not be interpreted in isolation. By using this document, you agree that you are an appropriately qualified health professional and agree to use all content from this brisbanetest.org website in accordance with the website's terms and conditions.

## Administration Guidelines

## Test administration is standardised

Each test item is administered by reading the instructions at the top of each task or question and following the prompts provided (written in grey).

## Repetition

One repetition of questions is allowed without penalty (one exception applies, as specified on test form)
When multiple repetitions are required:

- Due to significant hearing impairment/external noise

Do not penalise

- Due to language comprehension difficulties

Score as incorrect

## Prompting

Prompting is the provision of additional cues or information not already provided in the test administration instructions (e.g. providing an initial phoneme, or giving an additional gestural cue). Prompting during test administration is not allowed. Administer the test as per the set guidelines only.
If the patient does not understand the task based on the set instructions, determine the source of misunderstanding:

- Non-language related misunderstanding (e.g. hearing/visual impairment)

Do not penalise

- Repeat at increased volume (for hearing deficit)
- or increase size of visual stimuli (for visual impairment)
- Misunderstanding due to language-related difficulties

Score as incorrect

Discontinuation Rules (Note, discontinuation rules apply to the Brisbane EBLT Complete Test only)

## Brisbane EBLT Complete Test

Auditory Comprehension, Verbal Expression, Reading and Writing Sections

- Discontinue section if patient is unable to achieve a score (score $=0$ ) in three consecutive subtests. Once discontinued, score remaining items within section as incorrect and proceed to the next section (e.g. discontinued on Auditory Comprehension, proceed to Verbal Expression)
Perceptual Section
- Nil discontinuation rules apply - complete entire section with all patients


## Brisbane EBLT - Foundation Tests, Standard Test and High Level Test

No discontinuation rules apply within any section of these tests. Complete entire test with each patient. If patient is unable to achieve a score (score $=0$ ) in three consecutive subtests, proceed to the next section or select an alternative test (e.g. change from High Level Test to Standard Test).

Discontinuation rules apply

Nil discontinuation rules

Nil discontinuation rules

## Scoring Patient Responses

Score the first response within the target modality (response = purposeful attempt at an answer)
Do not penalise for unrelated non-purposeful movements/actions/verbalisations which are not intended as a 'response'. The most common acceptable responses are provided on the test form. If an alternative correct response is given (other than those listed) still score as correct.

Score only the language performance within each modality (spoken, written or action/gestural). Do NOT penalise score due to non-language related deficits impacting on performance (either with the input of test information or patient providing output response)

- Non-language related deficits with input of information (e.g. visual/hearing impairment)
- Non-language related deficits with patient output response (e.g. dysarthria, apraxia of speech, tracheostomy, hemiparesis, or limb ataxia)
- Language-related deficits with input of information (e.g. auditory comp deficit)
- Language-related deficits with patient output response (e.g. semantic paraphasia)

Do not penalise
Do not penalise

Score as incorrect
Score as incorrect

Scoring Indecipherable Responses (e.g. unintelligible verbal response due to dysarthria; illegible written response due to hemiparesis)

- Do NOT score test item (as language performance cannot be determined). Write 'Unable Do not score item to score due to....' and make a note that the task was attempted and describe nature of response (e.g. 'unintelligible due to dysarthria')


## Non-Responses

- Non-response due to non-language related condition (e.g. severe apraxia of speech). Do NOT score item (as language performance cannot be determined). Write 'NR due to ....' and make a note that the task was attempted and describe nature of attempt at response (e.g. 'NR due to apraxia of speech')
- Non-response due to language-related deficit

Do not score item
 ,

Score as incorrect

Self-Correction (Self-correction refers to the attempt to correct mistakes in any modality. Self-corrections may be successful or unsuccessful)

- Non-language related self-corrections (e.g. re-attempts at response in order to clarify reduced intelligibility speech due to dysarthria; attempts to neaten untidy written response due to hemiparesis)
- Language-related self-corrections (e.g. attempts to fix spelling mistakes; self-correcting after saying 'yes' instead of 'no' or 'chair' instead of 'table')

Do not penalise

Score as incorrect

Scoring after a delay (Normal delay periods vary for each question. High level tasks normally have a delay)

- Mild delay in responding (make clinical note there was a delay)
- Extended delay (i.e. over $\sim 10 \mathrm{sec}$ ) score as incorrect and move to next question

Do not penalise
Score as incorrect

## Perseveration within any modality (verbal, written or action/gestural)

- If first response is correct, mark as correct. Do not penalise for multiple correct

Do not penalise responses within same task

- If perseveration continues in subsequent tasks, score as incorrect for thesetasks


## Scoring Interpretation

## Overall Interpretation

There are five test versions encompassing the Brisbane EBLT. The same scoring method applies to all test versions. Each question is attributed a score which is summed to a Total Test Score. Cut-off scores are based on the Total Test Scores (or Total Adapted Test Score), with lower overall test scores indicating a greater likelihood of impairment. Judgement as to whether a test score constitutes a 'mild', 'moderate' or 'severe' condition is at the discretion of the assessing clinician.

The cut-off scores are often significantly below maximum possible scores. The Brisbane EBLT is not based on the premise that a perfect test score is indicative of normal (non-impaired) language. Instead, the test was specifically designed to avoid floor and ceiling effects (where nil or perfect scores are achieved) and be able to reflect variation in language functioning across the entire ability spectrum. In the Brisbane EBLT validation study, no floor or ceiling effects were observed with scores ranging from 7 to 215 (out of a possible 0 to 258) (Rohde et al., 2020).

## Interpreting the cut-off scores

Each Test version and Adapted Test Score (excluding Foundation Tests) has two cut-off scores. The two cut-offs have been provided to help optimise the clinical utility of the measure and are based on the supposition that language ability is a continuous construct and performance falls across a spectrum.

While the lower cut-off scores assist in indicating when the condition is present, higher cut-offs assist in indicating when the condition is absent. In situations where a score does not definitively fit within these score ranges, this indicates possible risk of impairment. Additional clinical factors should always be used to inform evidence-based decision making i.e. Does the patient or family report a change in language ability? (patient perspectives). Was there a sudden change in language capabilities in line with stroke onset? (clinical context) and What is your own clinical opinion? (clinician expertise). Note, age, education or gender were not found to significantly affect cut-off test scores.

Please see Rohde et al., (2020) for full description of the validation study and development of the cut-off scores.

## Interpretation of the two cut-off scores

- Lower cut-off score: Scores at or below this cut-off point are indicative of impairment. For this cut-off point, specificity has been prioritised, meaning that it will be rare (but not impossible) for patients to score at or below this point and not have aphasia.
- Higher cut-off score: Scores at or above this cut-off point are indicative of absence of impairment. For this cutoff point, sensitivity has been priorised, meaning that it will be rare (but not impossible) for patients to score at or above this point and still have aphasia.
- At risk zone: Scores within this zone do not definitively fit into either of the above categories and indicate risk of impairment. Additional factors should be considered to inform evidence-based clinical decision making.


## Using a single cut-off score

In circumstances when a single (binary yes/no) cut-off is needed (e.g. for research purposes), the lower cut-off thresholds should be used (e.g. for the Complete Test, use the lower cut-off of $\leq 157$ ).

Please note any medical or healthcare test is not perfect. There will always be some margin of variability. On occasion an individual may score below the stated cut-off and not present with a language impairment or may score above the higher cut-off and still present with language difficulty.
The accuracy of cut-off scores is indicated by their measures of sensitivity and specificity. All cut-off scores are to be interpreted within the ranges of statistical uncertainty (sensitivity/specificity estimates) as reported in Rohde et al., (2020). In evidence-based decision making a range of factors should always contribute to any clinical decision (including patient perspectives, clinical context and clinician experience) and cut-off scores should not be interpreted in isolation.

| Brisbane EBLT (Complete Test) | Lower cut-off | At risk zone | Higher cut-off | Maximum <br> possible score |
| :--- | :--- | :--- | :--- | :--- |
| Brisbane EBLT | 157 or below | 158 to 177 | 178 or above | 258 |
| Brisbane EBLT Adapted score: excluding <br> hospital ward items | 154 or below | 155 to 174 | 175 or above | 254 |
| Brisbane EBLT Adapted score: excluding <br> verbal expression subtests | 89 or below | 90 to 94 | 95 or above | 105 |

## Short Tests

| Foundation Test with Objects* | Lower cut-off | At risk zone | Higher cut-off | Maximum <br> possible score |
| :--- | :--- | :--- | :--- | :--- |
| Foundation Test with Objects | 61 or below | N/A* | N/A* | 67 |
| Foundation Test with Objects Adapted score: <br> excluding hospital ward items | 60 or below | N/A* | N/A* | 64 |


| Foundation Test* | Lower cut-off | At risk zone | Higher cut-off | Maximum <br> possible score |
| :--- | :--- | :--- | :--- | :--- |
| Foundation Test | 51 or below | N/A* | N/A* | 55 |
| Foundation Test Adapted score: excluding <br> hospital ward items | 48 or below | N/A* | N/A* | 52 |

*Foundation Tests do not have a higher cut-off as these tests focus on more severe conditions and have lower sensitivity estimates. A high or perfect score on the Foundation Tests does not necessarily indicate an absence of language impairment. If a high score is achieved, alternative test versions (Standard or High Level) should be used to further explore language ability.

| Standard Test | Lower cut-off | At risk zone | Higher cut-off | Maximum <br> possible score |
| :--- | :--- | :--- | :--- | :--- |
| Standard Test | 90 or below | 91 to 111 | 112 or above | 169 |
| Standard Test Adapted score: excluding <br> hospital ward items | 86 or below | 87 to 107 | 108 or above | 165 |
| Standard Test Adapted score: excluding <br> reading/writing | 61 or below | 62 to 80 | 81 or above | 137 |

${ }^{ \pm}$Note, any reading/writing deficits will not be identified

| High Level Test | Lower cut-off | At risk zone | Higher cut-off | Maximum <br> possible score |
| :--- | :--- | :--- | :--- | :--- |
| High Level Test | 78 or below | 79 to 96 | 97 or above | 176 |

