

Neurologic Outcome Measures CPG & StrokEDGE II



August 2018

Core Set of Outcome Measures: BERG BALANCE SCALE (BBS)

Last week, we introduced you to the recently revised **StrokEDGE II**, and described how these recommended measures can be used in conjunction with the Core Set of Outcome Measures CPG.

This week, we explore the first recommended measure: The Berg Balance Test. Review the CPG Action Statement related to this measure:

Core Measures CPG Action Statement 1: STATIC AND DYNAMIC SITTING AND STANDING BALANCE ASSESSMENT. Clinicians should use the Berg Balance Scale (BBS) for adults with neurologic conditions who have goals to improve static and dynamic sitting and standing balance and have the capacity to change in this area. The BBS should be administered under the same test conditions using the protocol recommended by the CPG Knowledge Translation (KT) Committee at admission, and discharge, and when feasible, between these periods for patients with acute, chronic stable and chronic progressive conditions.

The BBS is a very feasible measure in the clinic and has strong data to support interpretation.

Please find the recommended standardized administration protocol for the BBS here:

http://neuropt.org/docs/default-source/cpgs/core-outcome-measures/berg_protocol_final.pdf?sfvrsn=39cd5443_2

Interpretation and Application:

Once you have administered the BBS and have a score, you can interpret or apply this information in your clinical practice. Here are some ways:

- Track the score over time. If you are in acute care, establish a baseline score, even if this is very low. Document it clearly and assure that it is in your discharge documentation. If you are in inpatient rehabilitation, skilled nursing, or home health, refer to acute documentation to find previous scores for the BBS. With each subsequent administration, conclude the change score in your assessment statement or other documentation. ***Note:** Even if your patient scores a “0” on the BBS in acute care, this baseline score has value to show change at a later time point in rehabilitation.

- Use evidence to draw a conclusion(s) or set a goal for your patient. Access the CPG or Shirley Ryan Ability Lab Rehabilitation Measures website for reference to the available evidence related to stroke:

CPG:

https://journals.lww.com/jnpt/Fulltext/2018/07000/A_Core_Set_of_Outcome_Measures_for_Adults_With.10.aspx

Rehab Measures Database (from the Shirley Ryan Ability Lab):

<https://www.sralab.org/rehabilitation-measures/berg-balance-scale#stroke>

Example: Minimal Detectable Change (MDC) values

- Acute stroke, MDC of 7 (Stevenson 2001).
- Chronic stroke, the MDC varied from 4.66 to 6.7 points (Hiengkaew 2012, Liaw 2008)

Consider these MDC values in setting a short term goal. Consider the acuity level of your patient when selecting the goal for a change score.

When re-testing, consider the change score and compare it to this MDC value to confirm if the change detected exceeds the referenced MDC.

- Educate your patient:
 - Most everyone likes to hear how they “score” on a test. State the score and any trends you might have observed in your patient’s movement. Read the below vignette for an example.
 - Suggest your short term goal to the patient. Collaboratively determine if the goal is reasonable and relevant to patient’s larger goals or participation-level activities.
 - Briefly describe how the test helps you to set the patient’s plan of care. Will you progress activities in a specific way to improve a particular aspect of his/her balance?

Vignette:

Mrs. Jameson is a 67-year-old woman with right-sided hemiplegia, referred for evaluation of balance four weeks following her stroke. Following a 5-day acute hospital stay for a middle cerebral artery infarct, she spent 2 weeks in rehabilitation and was discharged home.

Patient reports that she loses her balance several times a day, often when arising or walking on the carpet. Patient reports she uses a quad cane for ambulation with her husband standing beside her.

BBS= 31/56

Scores of 3= sit to stand, stand to sit, transfers, standing eyes closed, and look over shoulder

Scores of 2= standing feet together, functional reach, slipper reach, and 360 degree turn

Scores of 0= stool touch, SLS, tandem stance

Example of Patient Education:

“Mrs. Jameson, your score on this balance test is 31/56. This score confirms your impaired postural stability, specifically in standing activities. Since your stroke was recent, I believe we can work together to make significant improvements to your balance, and you should anticipate much more stability while standing during your activities at home. We will plan to reassess with this test on a weekly schedule, and I anticipate you will see your score improve over time.

We can work on many of the movements you completed during the test, but we should prioritize tasks in which you have your feet closer together or when you are reaching and turning. We will challenge your balance by practicing tasks while standing on different surfaces and also by strengthening the muscles in your legs. Lots of repetition will help to improve your balance during our practice.

How about we set a goal for a score of 38/56 by the next assessment? Do you think this goal is reasonable to help you gain more stability when getting up from a chair

or during your standing activities at home?

Let's shoot for re-assessing with this measure around the end of next week. I'd also like to perform a few other measures to take a closer look at your ability to move from sit to stand and assess your balance while walking and walking speed. This will give me a well-rounded view of your mobility."

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