

# CORE MEASURE: ACTIVITIES-SPECIFIC BALANCE CONFIDENCE SCALE (ABC SCALE)

<b>OVERVIEW</b>	<ul style="list-style-type: none"> <li>◦ The ABC Scale is a self-report measure of balance confidence in performing various activities without losing balance or experiencing a sense of unsteadiness.</li> </ul>
<b>NUMBER OF TEST ITEMS</b>	<ul style="list-style-type: none"> <li>◦ 16 items</li> </ul>
<b>SCORING</b>	<ul style="list-style-type: none"> <li>◦ Each item is rated from 0% to 100%, with 0 indicating no confidence and 100% indicating complete confidence.</li> <li>◦ Ratings for each item should be whole numbers (0-100).</li> <li>◦ Total the ratings (possible range = 0-1600) and divide by 16 (number of items) to get the individual's ABC score or overall percentage of balance confidence.<sup>1,2</sup></li> </ul> <p><b>SCORING:</b> Total ÷ 16 = _____ % of self-confidence (ABC score)</p>
<b>EQUIPMENT</b>	<ul style="list-style-type: none"> <li>◦ None</li> </ul>
<b>TIME (NEW CLINICIAN)</b> <b>TIME (EXPERIENCED CLINICIAN)</b>	<ul style="list-style-type: none"> <li>◦ Approximately 5-10 minutes<sup>1,3</sup></li> <li>◦ Approximately 5-10 minutes<sup>1,3</sup></li> </ul>
<b>COST</b>	<ul style="list-style-type: none"> <li>◦ <b>Permission and Cost:</b> The print version of the scale may be reproduced for student training, research and clinical practices in which therapists and assistants use the scale to assess fewer than 1000 patients per year. In all other cases, including: translation into other languages than English, other modifications to the scale itself and/or instructions, use in clinical trials, for commercial or marketing purposes, or in larger scale practices (1,000+ patients per year) and electronic record keeping, permission must be obtained by the researcher or institution by contacting amyers@uwaterloo.ca.</li> </ul>
<b>LOGISTICS-SETUP</b>	<ul style="list-style-type: none"> <li>◦ Paper Survey</li> </ul>
<b>LOGISTICS-ADMINISTRATION</b>	<ul style="list-style-type: none"> <li>◦ Administration by face-to-face interview is recommended.<sup>1</sup></li> <li>◦ The ABC can be self-administered via a paper copy.<sup>1</sup> If scale is to be self-administered, the instructions should be provided on top or on a cover sheet. Instructions must address if they do not currently do the activity AND if they normally use a walking aid or hold onto someone.</li> <li>◦ Instructions: For each of the following, please indicate your level of confidence in doing the activity without losing your balance or becoming unsteady by choosing one of the percentage points on the scale from 0% to 100%. If you <b>do not currently do</b> the activity in question, try and imagine how confident you would be if you had to do the activity. If you <b>normally</b> use a walking aid to do the activity or hold onto someone, rate your confidence as if you were using these supports. If you have any questions about answering any of the items, please ask the administrator. 0% 10 20 30 40 50 60 70 80 90 100% No Confidence Completely Confident</li> </ul> <p>“How confident are you that you can maintain your balance and remain steady when you...”</p> <ul style="list-style-type: none"> <li>◦ 1: ... walk around the house? ___%</li> <li>◦ 2: ... walk up or down stairs? ___%</li> <li>◦ 3: ... bend over and pick up a slipper from the front of a closet floor? ___%</li> <li>◦ 4: ... reach for a small can off a shelf at eye level? ___%</li> <li>◦ 5: ... stand on tip toes and reach for something above your head? ___%</li> <li>◦ 6: ... stand on a chair and reach for something? ___%</li> <li>◦ 7: ... sweep the floor? ___%</li> <li>◦ 8: ... walk outside the house to a car parked in the driveway? ___%</li> <li>◦ 9: ... get into or out of a car? ___%</li> <li>◦ 10: ... walk across a parking lot to the mall? ___%</li> <li>◦ 11: ... walk up or down a ramp? ___%</li> <li>◦ 12: ... walk in a crowded mall where people rapidly walk past you? ___%</li> <li>◦ 13: ... are bumped into by people as you walk through the mall? ___%</li> <li>◦ 14: ... step onto or off of an escalator while you are holding onto a railing? ___%</li> <li>◦ 15: ... step onto or off an escalator while holding onto parcels such that you cannot hold onto the railing? ___%</li> <li>◦ 16: ... walk outside on icy sidewalks? ___%</li> </ul>

## ADDITIONAL RECOMMENDATIONS

- To track change, it is recommended that this measure is administered a minimum of two times (admission and discharge), and when feasible, between these periods, under the same test conditions for the patient.
- Recommend review of this standardized procedure and, on an annual basis, establish consistency within and among raters using the tool.

## COMMON QUESTIONS AND VARIATIONS

### 1. “What if the patient doesn’t complete one of the tasks on the ABC? How do I score the measure when this occurs?”

- a. The clinician should always try to have the patient complete all items. If appropriate and the patient does not currently do the activity in question, instruct the patient to try and imagine how confident they would be if they had to do the activity.<sup>4</sup>
- b. If it is not appropriate or the patient does not complete an item, an ABC score can still be determined by summing the ratings and dividing by the number of items answered if an individual answers at least 12 of the 16 questions. Most commonly omitted is the last item (... walk outside on icy sidewalks? \_\_\_\_\_%) in warmer climates.<sup>4</sup>

### 2. “What if the patient typically uses an assistive device when they complete the activity in question? Should they rate their confidence with or without using the assistive device?”

- a. The patient should rate their confidence in completing the task while using their current device.<sup>4</sup>
- b. The assistive device considered by the patient should be documented and kept consistent between trials and reassessments.
- c. It is likely, however that the type of assistive device may change over time. If the type of device “used” during rating of confidence has changed, the new type or condition of “no device” should be documented.

### 3. “What if the patient qualifies their responses with different rating for ‘up’ versus ‘down’ or ‘onto’ versus ‘off’ (i.e. items 2, 9, 11, 14, or 15)?”

- a. It is suggested to solicit separate ratings and use the lowest confidence of the two ratings, as this will limit the entire activity. For example, if on item 2 (...walk up or down stairs? \_\_\_\_\_%), the patient says they are 80% confident walking up the stairs and 60% confident walking down the stairs, their score for this item is 60%.<sup>4</sup>

### 4. “What if my patient is unable to read the instructions/questions (due to impaired cognition, impaired speech/language, vision deficits, etc)? Can I read it to them?”

- a. Yes. The measure can be administered by personal or telephone interview, if needed.
- b. Patients with lack of insight into impairments may have difficulty accurately answering the ABC questions. In

these cases, clinicians should use their judgement to determine appropriateness of administering this test.

### 5. “What if my patient is unable to correctly interpret the stem question (How confident are you that you can maintain your balance and remain unsteady when you...)? Can you vary it?”

- a. Yes. While adhering to the scripted stem question is preferred for standardization, you can vary/explain the stem if this is a barrier to administering the assessment.

### 6. “What if my patient does not speak English? Is the ABC available in other languages?”

- a. Yes. The ABC has been translated into a variety of other languages. However, the reliability and validity of these translations should be understood when administering a translated version of the ABC. Languages available include: Spanish,<sup>5</sup> German,<sup>6</sup> Chinese,<sup>7</sup> French-Canadian,<sup>8</sup> Korean,<sup>9</sup> Dutch,<sup>10</sup> Persian,<sup>11</sup> Brazilian-Portuguese,<sup>12</sup> Arabic,<sup>13</sup> Hindi,<sup>14</sup> and Turkish.<sup>15</sup>
- b. If the measure is administered in a different language, there is a risk of misinterpretation of items for those testers who are not fluent in the given language.

### 7. “What if my patient has a decline in the ABC score, the percent of balance confidence, but as a clinician I believe it is due to improved awareness and insight, not regression?”

- a. If this happens, it may be helpful for the clinician to look across other objective measures to provide support and rationale for the clinician’s conclusions.
- b. Administration of both clinician-rated and patient-reported measures may provide a more comprehensive assessment of balance confidence than administering only a clinician-rated measure.
- c. These data points may need to be excluded in aggregate analysis of change scores if the impression is that these do not reflect a true measure of balance confidence.

### 8. “These questions are not appropriate for patients who are non-ambulatory. Should I utilize this measure?”

- a. Clinicians should use the ABC to assess adults with neurologic conditions who have goals and the capacity to change in this area. If you predict that your patient may ambulate further along in his or her recovery, it may be worthwhile to perform this measure.

## REFERENCES

1. Powell LE, Myers AM. The Activities-specific Balance Confidence (ABC) Scale. *J Gerontol A Biol Sci Med Sci*. 1995;50A(1):M28-34.
2. Myers AM, Powell LE, Maki BE, Holliday PJ, Brawley LR, Sherk W. Psychological indicators of balance confidence: Relationship to actual and perceived abilities. *J Gerontol*. 1996;51A(1):M37-M43.
3. Raad J, Moore J, Hamby J, Lainez Rivadelo R, Straube D. A brief review of the Activities-specific Balance Confidence Scale in older adults. *Arch Phys Med Rehabil*. 2013;94(7):1426-1427.
4. Myers AM, Fletcher PC, Myers AH, Sherk W. Discriminative and evaluative properties of the Activities-specific Balance Confidence (ABC) Scale. *J Gerontol Med Sci*. 1998;53A:M287-294.
5. Montilla-Ibáñez, A, Martínez-Amat A, Lomas-Vega R, et al. The Activities-specific Balance Confidence scale: reliability and validity in Spanish patients with vestibular disorders. *Disabil Rehabil*. 2017;39(7):697-703.
6. Schott, N. German adaptation of the "Activities-specific Balance Confidence (ABC) scale" for the assessment of falls-related self-efficacy. *Z Gerontol Geriatr*. 2008;41(6):475-485.
7. Mak MK, Lau AL, Law FS, Cheung CC, Wong IS. Validation of the Chinese translated Activities-Specific Balance Confidence scale. *Arch Phys Med Rehabil*. 2007;88(4):496-503.
8. Salbach NM, Mayo NE, Hanley JA, Richards CL, Wood-Dauphinee S. Psychometric evaluation of the original and Canadian French version of the activities-specific balance confidence scale among people with stroke. *Arch Phys Med Rehabil*. 2006;87(12):1597-1604.
9. Jang SN, Cho SI, Ou SW, Lee ES, Baik HW. The validity and reliability of Korean Fall Efficacy Scale (FES) and Activities-specific Balance Confidence scale (ABC). *J Korean Geriatr Soc*. 2003;7(4):255-268.
10. van Heuvelen MJ, Hochstenbach J, de Greef MH, Brouwer WH, Mulder T, Scherder E. [Is the Activities-specific Balance Confidence Scale suitable for Dutch older persons living in the community?]. *Tijdschr Gerontol Geriatr*. 2005;36(4):146-154.
11. Hassan H, Zarrinkoob H, Jafarzadeh S, Akbarzade Baghban A. Psychometric evaluation of Persian version of Activities-specific Balance Confidence scale for elderly Persians. *Auditory and Vestibular Research*. 2015;24(2):54-63.
12. Marques AP, Mendes YC, Taddei U, Pereira CA, Assumpção A. Brazilian-Portuguese translation and cross cultural adaptation of the activities-specific balance confidence (ABC) scale. *Braz J Phys Ther*. 2013;17(2):170-178.
13. Alghwiri AA, Alghadir AH, Al-Momani MO, Whitney SL. The activities-specific balance confidence scale and berg balance scale: Reliability and validity in Arabic-speaking vestibular patients. *J Vestib Res*. 2015;25(5-6):253-259.
14. Moiz JA, Bansal V, Noohu MM, Gaur SN, Hussain ME. .. Cross-cultural adaptation and psychometric analysis of the Hindi-translated activities-specific balance confidence Scale. *Middle East J Rehabil Health*. 2016;3(1):e34886.
15. Karapolat H, Eyigor S, Kirazli Y, Celebisoy N, Bilgen C, Kirazli T. Reliability, validity, and sensitivity to change of Turkish Activities-specific Balance Confidence Scale in patients with unilateral peripheral vestibular disease. *Int J Rehabil Res*. 2010;33(1):12-18.

## ACKNOWLEDGEMENT

Dr. Anita M. Myers is the primary developer and copyright holder. She is a Distinguished Professor Emerita at the School of Public Health and Health Systems at the University of Waterloo, 200 University Avenue West, Waterloo, ON, Canada N2L 3G1. **Email: [amyers@uwaterloo.ca](mailto:amyers@uwaterloo.ca)**.