

NIH Toolbox FAQs for Changes Scheduled for November 2013.

NIH Toolbox Pattern Comparison Processing Speed Test version 1.1

- *What is changing on the NIH Toolbox Pattern Comparison Processing Speed Test?*

The NIH Toolbox Pattern Comparison Processing Speed Test was changed so that the timing is not affected by network connection or server speed. The stopping rule has been modified so that the test concludes when the sum of the test-taker's item response times equals 86 seconds. Previously, the test concluded when 90 seconds (clock time, which is less than the sum of item response times) had elapsed. This change to the stopping rule has resulted in a slightly longer test, but ensures an equitable experience for all test takers. The revised test is labeled version number 1.1 (the originally published version was version 1.0).

- *How will my NIH Toolbox Pattern Comparison Processing Speed scores be affected?*

The raw score will be affected because some people who took the previous version of Pattern Comparison (1.0) received fewer items than they will on version 1.1. Thus, most participants will see a small increase in their raw scores. The normative scale scores (unadjusted, age-adjusted and fully adjusted) have been updated to reflect the change in the length of the test. All raw and normative scale scores for version 1.0 will be revised to be equivalent to version 1.1. (If you wish to retain the old raw and normative scale score data, even though they will no longer be applicable, we are suggesting that users export a copy of the Assessment Scores report prior to the upgrade).

- *How can I be sure I can compare old Pattern Comparison vs. new Pattern Comparison scores? Are there any special techniques needed for comparison?*

Our Biostatistics team has developed an algorithm to convert Pattern Comparison version 1.0 raw scores to version 1.1 raw scores. This algorithm will be programmatically applied to existing records on Assessment Center. The algorithm will be published in a revised NIH Toolbox Scoring and Interpretation Manual and will be posted on the NIH Toolbox website (NIHToolbox.org).

NIH Toolbox Picture Vocabulary Test and NIH Toolbox Oral Reading Recognition Test

- *Will the test or any of the test items change on Picture Vocabulary or Reading Recognition Tests?*

No. The tests, the test items and the theta scores remain the same. Only the normative scale scores (comparisons of a given test-taker to a nationally representative sample) were modified. This means that there is absolutely no change in the user experience, but those researchers who utilize normative scale scores will need to use the new values now available.

- *What is a theta score?*

A theta is a measure of a person's ability based on Item Response Theory (IRT). The theta is derived during the computer adaptive test (CAT), which allows for highly accurate estimates of performance with fewer questions. From a traditional testing perspective the theta is the basic "score" of the assessment (the same as a "raw score" is used in classical testing).

- *Will I be able to compare data already collected on Vocabulary and/or Reading tests with newly collected data?*

Yes. The new norms will be retroactively applied to existing participant records. Theta scores will not be revised. We strongly suggest that you use the newly published normative scale scores. However, if you wish to retain the

old normative scale score data, even though it is incorrect for some score ranges, we suggest exporting a copy of the Assessment Scores report prior to the upgrade.

Will I still have access to the data I collected before the corrections were applied?

No, not unless you export your latest data from Assessment Center. We recommend that everyone do this the day before the update is applied if they want to have access to their 'old' data.

- *Can I opt out of these changes since my study is ending?*

No. The changes we are making are to correct existing instrument or scoring problems, so you cannot choose to opt out.