Reviewer’s report

Title: Quantifying cognition at the bedside: A novel approach combining cognitive symptoms and signs in HIV

Version: 1 Date: 18 Sep 2015

Reviewer: Carolyn Fredericks

Reviewer’s report:

With regard to comment #1, the authors reword as follows: "there is an increasing focus on intervening at the first signs of decline"

The authors state several times in this paragraph that identification of mild cognitive impairment in its earliest stages is a priority, that there is increasing focus on this, etc — but a statement about why this should be, and what the anticipated benefits to patients and clinicians might be, would go a long way in terms of motivating the paper.

With regard to comment #3, in their revision, the authors now state that deficits in HIV arise from diffuse network degeneration as opposed to the focal degeneration seen in Alzheimer's disease. Although early Alzheimer's disease may show the greatest structural atrophy in the hippocampi, as with other neurodegenerative disorders, it is associated with widespread disruptions at the network level as well. This statement should be reworded. It may be more fair to state simply that the pattern of deficits seen in HIV (attention, executive function, processing speed) is one that the authors hypothesize could be conceived of as a single construct, rather than trying to draw a distinction between "diffuse" network degeneration in HIV vs other disorders (particularly those, such as vascular dementia, CTE, etc that may present with similar deficits).

With regard to comment #10, the authors state "We are able to confirm that those with and without depressive symptoms all fit the same Rasch model." Would provide statistical evidence of this in the results section.

Though the caption explaining the abbreviations for the tests cited is helpful, Table 4 remains difficult to interpret. Recommend highlighting items from different groups in different colors or otherwise reworking.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes
Are the conclusions drawn adequately supported by the data shown?
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